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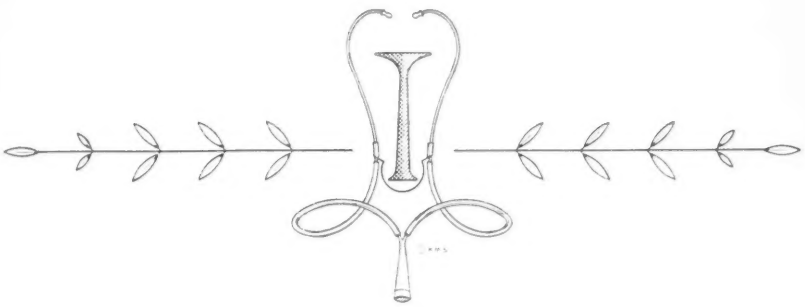

## SEPTEMBER 1935


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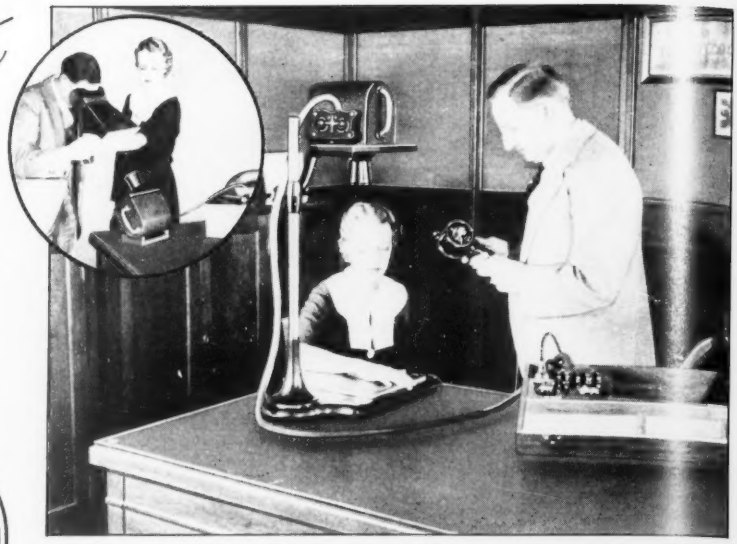

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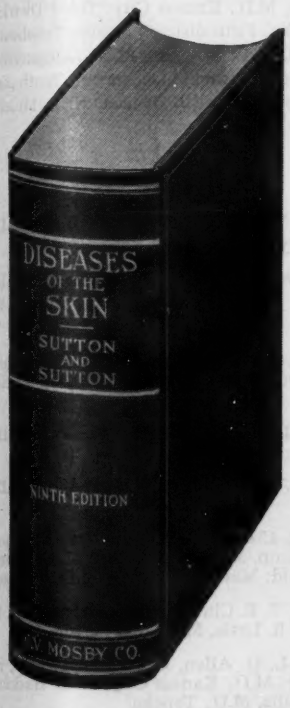


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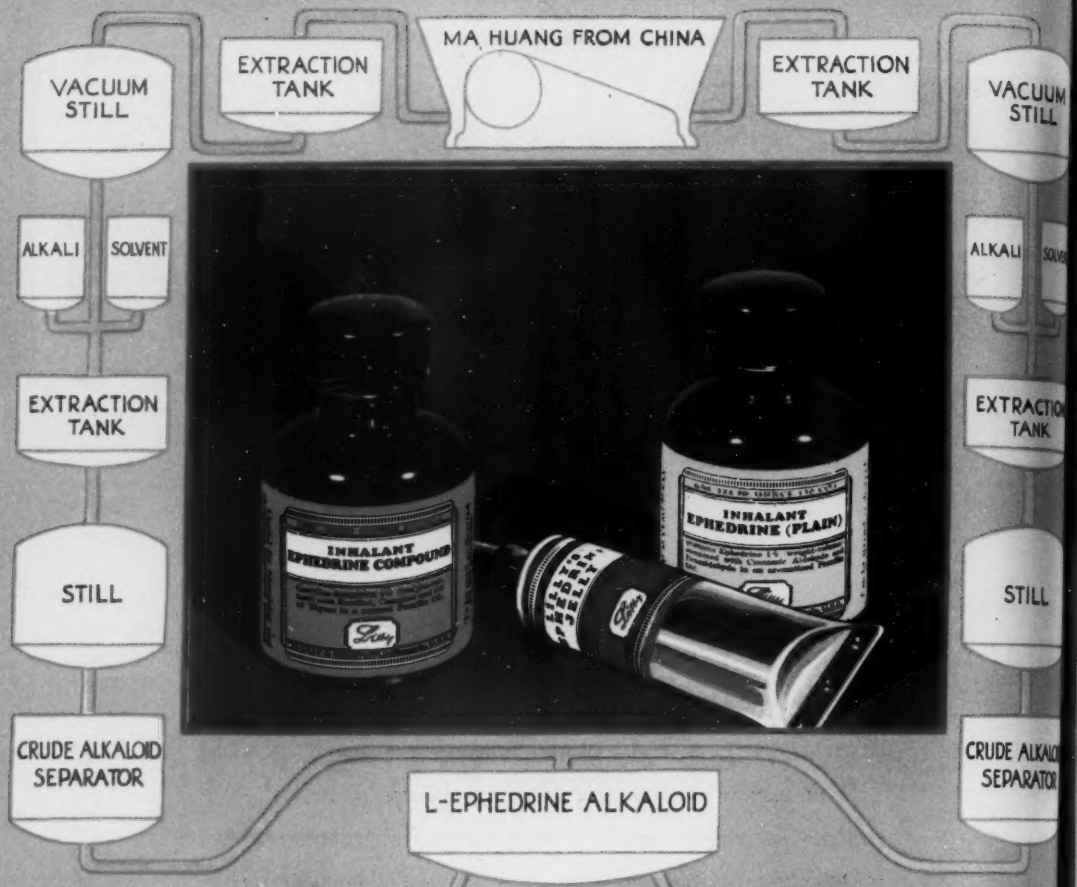


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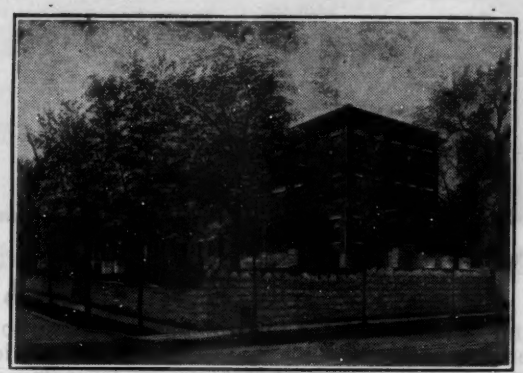

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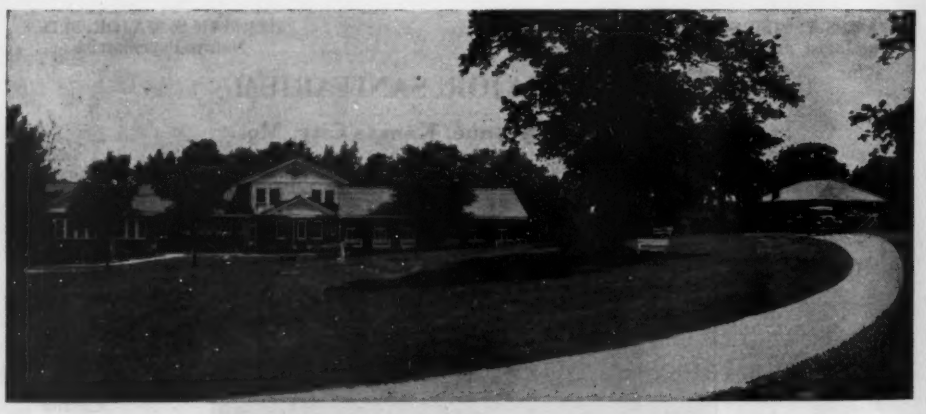

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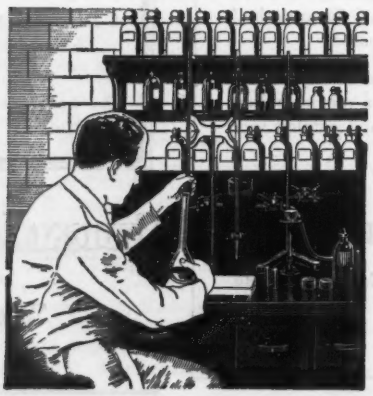

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# THE RELATIONSHIPS BETWEEN THE ENDOCRINE SYSTEM AND THE PERSONALITY

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In an attempt to establish definite relationships between the endocrine system and the personality we are confronted with three major unknowns. First, our knowledge of the specific influences of the various endocrine glands and their inter-relationships is inadequate. Except in the advanced stages of diseases of these glands we know little of their influence on the personality and their inter-relationships are extremely complicated, e. g., the pituitary with at least fifteen hormones, pancreatropic, thyreotropic, oxytocic, fat, adrenotropic, etc.[1] The second unknown is the extent of the influence the personality may have on the vegetative and sympathetic nervous systems, and consequently on the endocrine glands. Although some recent work has indicated the tremendous importance of psychologic factors in gastro-intestinal disorders, ([2] and see references therein), as yet with the exception of the thyroid disorders there have been no satisfying investigations reported of how the deeper strata of the personality (the unconscious) can affect these systems. The third great unknown is the important x-factor of constitution which certainly plays an important role in determining the psychic as well as the endocrine picture. In feeblemindedness (a condition associated with a typically degenerative type of constitution) 21.1 per cent of cases show clinical evidence of glandular difficulties[3] and seventy-five per cent show postmortem evidence of glandular changes.[4]

*From the Menninger Clinic and Sanitarium, Topeka, Kansas. Read at the Post-Graduate Course in Neuropsychiatry on April 18, 1935, and the Southeast Kansas Medical Society, Pittsburg, Kansas, June 12, 1935.

There are, however, even further difficulties to beset the path of our understanding and lead some physicians to be satisfied to label as "endocrine" any case showing a few stigmas without even attempting to delineate the glands involved. The number of pluriglandular syndromes is apparently legion, and it is often impossible to determine whether a specific symptom is due to one or another gland. The reports of treatment are extremely confusing: Treatment of a group of schizophrenic patients with the same gland is reported by one set of observers[5] as being universally effective and by another group as having little or no effect. There are relatively few large series of cases thus treated which have been conservatively evaluated.[6]

A final difficulty is the personal equation factor—the endocrinologist tends to see the symptoms as endocrinogenic and the psychiatrist, as psychogenic. Too often through failure to see the process as a total organism reaction there is a tendency to separate the mind and the body, the personality and the glands, and so chase the futile merry-go-round of establishing a direct cause and effect.

## ESTABLISHED GENERAL RELATIONSHIPS

Possibly without exception all severe endocrine disorders do produce deviations in the personality. It is equally true, however, that there is no consistency in the type of the mental picture which is associated with any specific endocrine picture; (possible exceptions are cretinism and preadolescent castration in the male). The major changes are well presented in popular form by Hoskins[7] in his "The Tides of Life," and Berman[8] in "The Glands Regulating Personality." Stockard[9] presents a slightly different approach which is shown in the cross-breeding of various types of dogs in his "The Physical Basis of Personality." Other than textbooks on endocrinology two treatises

[10, 11] have been published which deal directly with the effect of the endocrine system on the personality.

It is equally probable that all severe (and possibly even mild) psychologic disturbances produce endocrine deviations; this is suggested by clinical, metabolic, and pathologic studies of patients with mental disorders. From clinical study Rowe and Pollock[12] found that seventy-six per cent of 250 patients with mild mental disorder show some conspicuous endocrine defect. The metabolism in mental disorder has been shown repeatedly to be disturbed directly in relation to the mental state. [13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23] The basal metabolic rate is approximately ten per cent below normal in schizophrenia, usually increased in excited states and decreased in depressions. The calcium metabolism is often disturbed[24] and disturbances in carbohydrate metabolism have often been reported.[25, 26, 27, 28, 29] Usually there is a delay in the utilization of the ingested carbohydrates and a tendency for a lowered blood sugar-renal threshold. Pathologic studies of the endocrine glands in mental disorder have revealed no consistent though very frequent changes in the glands, even in the absence of physical (clinical) signs.[30] Pathologic changes have been noted in the testicles[31, 32] and in the pituitary glands in the great majority of cases.[33]

## APPROACH TO THE PROBLEM

For the sake of simplicity and in part also because of the present state of ignorance of interglandular relationships, only monoglandular syndromes are here reviewed. Three relationships are considered: (1) Cases primarily endocrine (i. e., at their onset), and secondarily developing mental symptoms due either to over-or underactivity of the gland, or to associated emotional responses to physical alterations attributable to the glandular disease; (2) cases primarily psychiatric (i. e., the mental symptoms predominate at the onset of the ill-health) with a subsequent development of endocrine disorder; (3) cases in which there is a concomitant development of personality and endocrine disorders.

## PITUITARY DISORDERS

In 1928 Menninger[34] concluded from a study of forty-two cases that there was no uniformity of association of a particular mental picture with any type of pituitary disorder.

Primarily Endocrine Pictures: The three more common clinical pictures of underactivity of the pituitary gland are: pre-adolescent adiposogenital dystrophy; a post-adolescent hypofunction (chiefly posterior lobe deficiency); and infantilism (anterior lobe deficiency). In pre-adolescent adiposogenital dystrophy the most common mental picture is that of intellectual retardation of varying degrees, and often conduct disorder.[35, 36, 37, 38] Such individuals are usually dull, slow and irritable.

Case 1. Female aged sixteen. The patient did not begin to walk or talk until two and one-half years of age; she was the oldest of four children and the only one to show either mental or pituitary abnormalities. The intellectual retardation was noted in her fifth year; she entered school at age seven but even with application apparently did not learn anything. She was quiet and obedient but would whine and complain. She was promoted each year although she never did passing work in any subject. Her mental age was eight years; I. Q. 50. She was five feet two inches tall and weighed 144 pounds, thirty pounds overweight. She was awkward in her movements and had a fine tremor. The blood cytology was normal, and the Wassermann reaction negative. The urine was normal. The diagnoses made were hypophrenia and adiposogenital dystrophy.

Occasionally a precocious intellectual development is associated with adiposogenital dystrophy.[38, 39]

Occasionally an individual with adiposogenital dystrophy continues through life with an inadequate function of the posterior lobe. More frequently the cases of hypofunction appear in the second and third decades, and often the associated mental symptoms are schizoid or even schizophrenic in nature. These facts are well illustrated in the following case summaries (and illustrations showing the pituitary disturbances).

Case 2. No. 1669. Male aged thirty-six. There was a normal developmental history except that the testicles were undeveloped. Between the ages of thirty-three and thirty-six the patient was arrested four times for holding stolen goods and for writing bad checks. He had recurrent somnolent episodes of thirty-six hours duration. He compulsively took long auto trips "to get the air." X-ray examination showed a small sella turcica. The patient's weight increased from 130 pounds to 254 pounds. A mental diagnosis of Schizophrenia was made.

Case 3. No. 2385. Male aged thirty-eight. Height five feet six inches. The patient's weight at age fifteen was 155 pounds; it had increased up to 212 pounds at the time of examination. At age thirty-two he developed the delusion that he had cobras inside of him and that he was being poisoned. He began to sleep ten hours and more at night. He developed severe headaches which lasted two or three weeks, at intervals of about six weeks. He complained of "black spells" and expressed delusional material which made a diagnosis of Schizophrenia unquestionable.

Case 4. No. 4488. Female aged forty-two. A diagnosis was made of mental deficiency with que-

Case 2. No. 1669. Adiposo-Genital Dystrophy in Adult

tionable psychosis. The patient had acted "queer" since the age of twenty-two. She began gaining weight at age twenty-four at which time also she threatened her husband's life. She slept from ten to thirteen hours nightly. The patient had sick headaches twice a month. She had small hands and a small head. Her weight was 272½ pounds.

Case 5. No. 4488-B. Female aged sixty. The onset of her illness occurred at age thirty-one, and she was hospitalized at age thirty-seven. She talked much of unseen people and had no insight into her condition. She was completely disoriented and deteriorated. There was considerable hair on her face, and she had large hands and feet. Her weight was 290 pounds. A mental diagnosis of Paranoid Schizophrenia was made. There was hypoactivity of the posterior lobe of the pituitary and hyperactivity of the anterior lobe.

Hypoactivity of the anterior lobe before adolescence produces an infantilism of the body build, first described by Lorrain and so named. There is no consistent mental picture associated with this syndrome though mental retardation is common; this is illustrated in the following case.

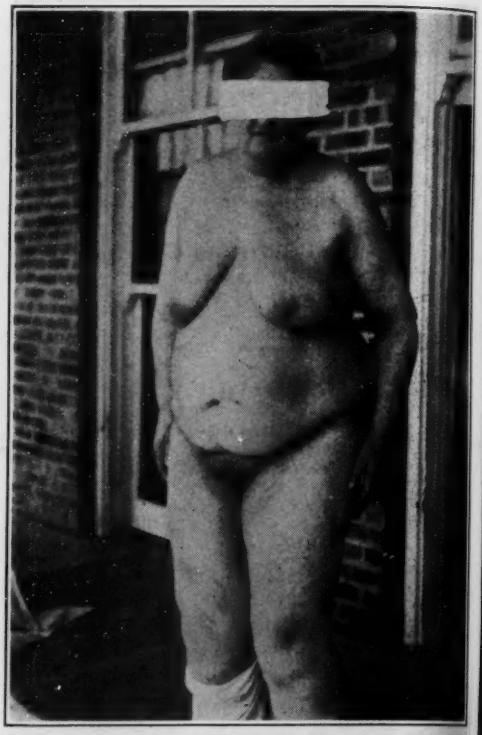
Case 6. No. 4489-A. Male aged twenty. The patient was feebleminded, the youngest of ten children. At the age of nineteen he developed spells of weakness without loss of consciousness; he had no headaches. There was a childhood history of enuresis. His height was five feet two inches.

Hyperfunction of the pituitary gland before adolescence usually produces giantism, and after adolescence, acromegaly. In giantism there is no consistent mental picture. In five such cases studied[40] one patient was feebleminded and the other four were schizoid. Two are briefly presented here.

Case 7. No. 4489-C. Male aged twenty-one. The patient had pulmonary tuberculosis and was feebleminded, probably on a congenital syphilitic basis. X-ray of the skull showed osteoporosis and a normal sella. The spinal fluid was negative. His height was six feet four and one-half inches; weight 132 pounds.

Case 3. No. 2385. Posterior Lobe Hypopituitarism

Case 4. No. 4488-I. Post-Adolescent Pituitarism



Case 5. No. 4488-B. Dyspituitarism

Case 8. No. 687. Male aged sixteen. The patient showed hyperactivity of the anterior lobe of the pituitary with a mental picture of Schizophrenia. He complained of headaches. Height six feet three and three-fourths inches.

Occasionally mental symptoms develop which suggest a deficiency in pituitary activity in an individual whose bony growth gives evidence of an earlier hyperactivity.

Case 9. No. 566. Male aged thirty-seven. The patient showed many signs of dyspituitarism, suggesting hyperactivity of the anterior lobe before adolescence. When examined he showed suggestive secondary pituitary insufficiency, with excitability, restlessness, discontent and impotence. His height was six feet three inches.

In the acromegalic individual, the most commonly associated mental change is depression, and rarely a hypomanic state is seen.[41, 42, 43]

Case 10. Female aged fifty-five. The patient had enjoyed a fairly successful career as a teacher. At age about thirty-five she began to notice enlargement of her hands and facial features accompanied by periodic attacks of polyuria and headache. She consulted a physician who on examination of the urine told her that she had diabetes. She responded fairly well to dietary treatment and continued teaching. At age thirty-eight she had a mild depression, arising, she thought, from overwork and worry connected with teaching. She gave up her work for half a year and apparently completely recovered her mental health. Her acromegaly continued to become more prominent but she apparently did not develop any sense of inferiority from it. She had four attacks of depression, lasting from two to six months, during which the polyuria and headaches were always more pronounced.

Rarely one notes a schizophrenic-like reaction[44] as illustrated in the following cases:

Case 11. No. 4489-H. Male aged forty-seven. This acromegalic had a history of epilepsy in childhood. He was feebleminded and developed a fear that someone was going to kill him and his family. He wanted to get away from home; he talked incessantly and would not eat. Later he became mute. His weight was 210 pounds. He had tremendous ears, rhinophyma of the nose, and extremely large hands and large breasts. He had convulsions about once a month.

Case 12. No. 4489-E. Female aged thirty-eight. This patient was an acromegalic with a diagnosis of Paranoid Schizophrenia; she showed delusions of persecution, visual and auditory hallucinations, and was aggressive and resistive.

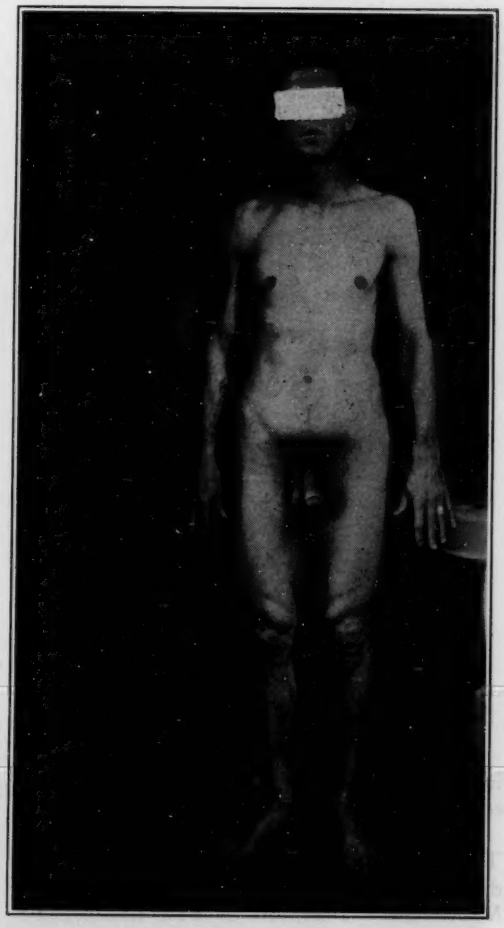
Much more frequent than frank psychoses are the emotional disturbances which appear secondarily to physical alterations in the body structure due to the dyspituitarism, for example, obesity. This is well shown in the following case.

Case 13. Female aged eighteen. Physically the patient presented a typical picture of hypopituitary obesity; she had always been mentally alert and

sociable, and intellectually above the average, though she was hypersensitive. She came from a socially prominent family. During her first few months at college, before her sorority sisters felt familiar with her, she got along well. As time passed and her dieting and treatment efforts were more evident the girls began to joke about her obesity and this continued until the patient became acutely depressed about it. It was necessary to enlist the aid of the housemother and several girls to prevent her leaving college.

Primarily Psychiatric Pictures: There are no conclusive examples of pituitary changes secondary to psychological factors. Cases of schizophrenia show a high per cent of mild pituitary (particularly metabolic) changes [12, 35, 39] development of obesity, changes in the carbohydrate metabolism, and increased specific dynamic action.[45] It is a common (though rarely described) observation that the great majority of cases of adiposogenital dystrophy disappear with the progress of adolescence; this is at least suggestive of a functional rather than an organic change.

Concomitant Development of Mental and Pituitary Symptoms: The concomitant development of mental and pituitary symptoms is rarely sufficiently common or pathognomonic to confuse the primary condition. The suggestive signs of pituitary disorder developing in mental illness (adiposity, weight loss, carbohydrate metabolism disorder, disturbed fluid equilibrium, menstrual irregularities or cessation) may be attributed to the involvement of other glands.



Case 9. No. 566. Pre-Adolescent Hyperactivity of Pituitary, Anterior Lobe

Case 6. No. 4489-A. Lorrain Infantilism

Case 7. No. 4489-C. Giantism

## PANCREATIC RELATIONSHIPS

The relationships between the personality and the various clinical pictures simulating diabetes are confused by our inadequate knowledge regarding the etiology of diabetes. Thyroid influences may produce a picture of diabetes. There is a very definite relationship between the pituitary gland and diabetes, as shown by Houssay.[46] He removed the pancreas from dogs and produced diabetes; this, however, disappeared with removal of the pituitary gland and returned when the dog was treated with pitui-

Case 11. No. 4489-H. Acromegaly

tary substance, thus demonstrating the presence of a pancreatropic pituitary hormone.

Primarily Diabetic (organic) Disorders: The relation between psychiatric and diabetic disorders is the subject of an extensive study by Menninger.[47] There are at least five organic clinical pictures simulating diabetes which may be associated with personality changes. Occasionally diabetes mellitus is associated with, and apparently responsible for, a toxic mental state; this is shown in the following case.

Case 14. Male aged fifty-seven. The patient had been unhappily married for some years. He had diabetes seven years prior to examination but felt well and took no treatment; he developed leg pains which forced him to go for treatment. A glucose tolerance test showed very high blood sugar levels: fasting blood sugar 331 mgm.; 1 hour 647 mgm.; 2 hours 579 mgm.; 3 hours 628 mgm.; 4 hours 524 mgm.; 5 hours 415 mgm. He was treated with diet and insulin and the symptoms disappeared. For eighteen months he continued treatment and then after five months of neglect he reported with a gangrenous left toe; he was hospitalized but lived only two months. During this time there was slight expansion of the gangrene, but then it nearly dried with slight sloughing. Despite insulin and diet his blood sugar repeatedly fluctuated above normal and was as high as 300 mgm. For approximately two weeks prior to death he was very confused, disoriented and had delusions that his clothing had been stolen. His remote memory remained fairly intact but his recent memory was very unreliable. He was afebrile until two days before death; even at this time his urine was free from sugar and acetone, although the blood sugar was 415 mgm. He died of pneumonia, and the autopsy findings disclosed no brain changes and no other pathology.

Not infrequently the first apparent symptoms of tumors of the pancreas are mental, usually as marked emotional disturbances.[48] A marked glycosuria may be associated with brain tumors or hemorrhages. A recently reported case of a ruptured aneurysm in the circle of Willis showed a diabetic-like picture.[49] The clinical entity of hyperinsulinism has been subdivided into various types ([50] but mental symptoms are frequent: thirty-six of fifty cases with a fasting blood sugar below 0.07 per cent showed mental symptoms[51]). The following case, previously reported,[52] illustrates the mental symptoms in a case of chronic hypoglycemia, i. e., hyperinsulinism.

Case 15. Female aged fifty. The patient complained of headaches of four years duration and dizziness of recent onset. She had amenorrhea after a hysterectomy at age forty-three. The headaches would disappear on lying down but gradually increased in severity until the patient was in almost constant severe pain. At times there was transitory confusion and inadequacy of thought. The day before she was hospitalized she started to talk but succeeded only in jabbering but this disturbance disappeared suddenly. The physical examination was negative though there were minor neurological abnormalities. Initial fasting blood sugar was forty mgm. The patient acted queerly for several short periods, declaring that she was going crazy, that there was something the matter with her head; occasionally she was tearful and would kick her legs in the air. Subsequent blood sugar tests were always very low; she responded promptly to small frequent feelings. Later a laparotomy was performed which revealed a marked fibrosis of the liver but no abnormality of the pancreas.

Insulin psychoses have been described in about three per cent of diabetic individuals treated with insulin.[53, 54] Such reactions may take either an organic focal form or a purely psychotic form.

Primarily Psychiatric Pictures: Emotional glycosuria has been repeatedly demonstrated in animals by merely tying them to a board.[55, 56, 57, 58] In man it has been shown to be present under the stress of examinations.[59, 60, 61] Disturbances of the carbohydrate metabolism in various acute mental illnesses have been reported frequently[25, 26, 27, 28, 29] and show chiefly a retardation in glucose metabolism in schizophrenia and depression, and an acceleration in manic states.

Diabetes mellitus has been reported to have been initiated by psychic trauma, and in a series of cases personally studied more than

fifty per cent of patients were under great psychological stress at the time of the onset of their diabetes. In certain cases of mental disorder a disturbance of the carbohydrate metabolism of a diabetic-like type occurs, which gives rise to the possible psychic etiology of some cases of diabetes.[62] In such cases the criteria of the psychogenic origin of the disturbance include five factors: first, the psychopathology must be in evidence before the appearance of the carbohydrate disturbance; second, the mental picture must not be of the toxic or hypoglycemic type; third, there is a parallelism in the course of the two disorders; fourth, glycosuria and hyperglycemia must be present; and fifth, with mental recovery the carbohydrate disturbance must clear.

Emotional disturbances greatly influence the course of an established diabetes so that the insulin dosage and diet is entirely inadequate, although it had previously been satisfactory.[63, 64, 65, 66]

Concomitant Relationship Between Diabetes and Mental Disorder: In many cases of mental disorder a disturbance of the carbohydrate metabolism is present and there is no apparent relationship between the two conditions though their courses may be parallel. Rarely is there an inverse relationship in which the mental symptoms improve as the diabetes becomes more pronounced, or vice-versa.[67] In even rarer cases there is an alternate relationship: when the mental symptoms develop the diabetes disappears but returns as the mental symptoms subside.[68, 69]

## THYROID DISORDERS

Primarily Thyroid Dysfunction: In Basedow's disease mental symptoms of tenseness and anxiety are often conspicuous without the appearance of psychotic symptoms; psychoses are rare. This was noted by Karnosh and Williams[70] who found thirty-one cases with hyperthyroidism in 7,422 cases of mental disorder. There is no consistent mental picture. Perhaps the most common type of psychosis resembles schizophrenia of the catatonic type.[71, 72] Parthon[73] found that fifty-six of eighty-six cases of hyperthyroid psychosis were manic-depressive in their symptomatology; this finding is noted also by other writers.[74, 75] An acute toxic psychosis has also been described.[76]

In myxedema there is characteristically a slowness of thought, apathy, and motor inactivity. The patient shows sluggish reactions and indefiniteness in his emotional responses; occasionally a manic state is seen.[77]

Cretinism is always associated with feeblemindedness and a stunted physical growth. This is well illustrated in the following case.

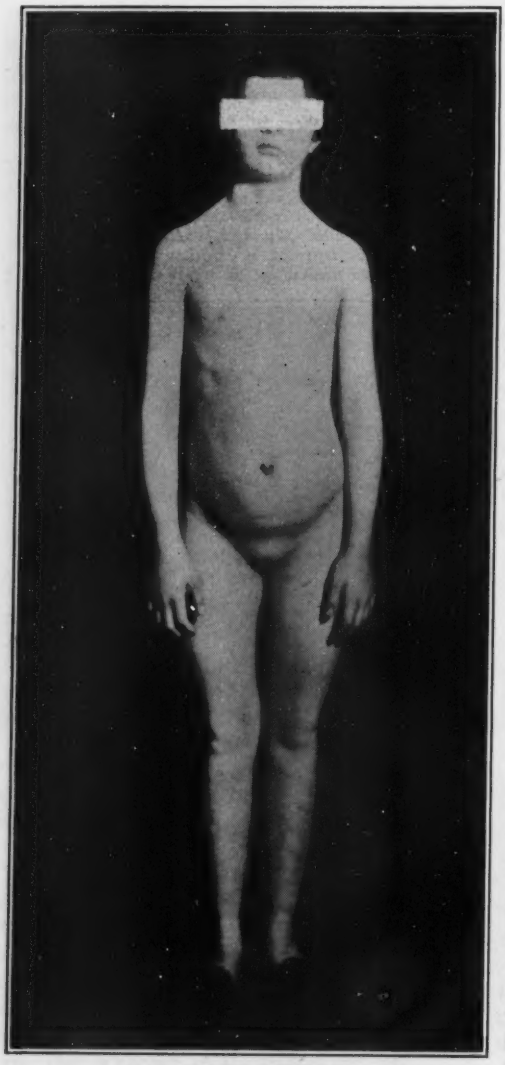
Case 16. No. 4487-A. Female aged thirty-six. The patient attended school for three years but was unable to progress. She had temper outbursts and would throw dishes and break dolls. She was placed in a feebleminded school at twenty-two years of age. She was regarded as hopeless. Her I. Q. was forty and her mental age, six years six months.

Case 16. No. 4487-A.

Closely associated with thyroid disorders though not as specifically a pure thyroid dysfunction are the cases of Mongolian idiots in which there is a general endocrine dyscrasia associated with faulty physical development and mental retardation. This is well illustrated in the following case:

Case 17. No. 2064. Female aged eleven. The patient was a full term child. There was no birth trauma. She held her head up at one year, sat up at three years, and walked at seven years. She could say a few words at six years of age. Her mental age was three years and three months.

Primarily Psychiatric Disorders: In all forms of excitement there is an increased basal



Case 17. No. 2064. Mongolism

metabolic rate, and conversely a decreased basal rate in depressions. The mechanism for this is probably very complicated but it is at least suggestive of thyroid overactivity.[78]

Hyperthyroidism has very frequently been ascribed to purely psychological etiology. The prevalence of psychic trauma has been often noted.[79, 80, 81] Conrad[82] found that ninety-six per cent of 200 cases of toxic goiter had a history of emotional stress, and that symptoms occurred immediately preceding the onset of the toxic thyroid symptoms. Psychic factors have been regarded as the specific cause of thyrotoxicosis[83, 84, 85] and psychoanalytic studies have supported this observation.[86, 87, 88]

Most surgeons as well as most psychiatrists recognize the tremendous importance of emotional factors in the etiology of hyperthyroidism. Undoubtedly there are cases in which psychotherapy is the superior method of treatment, though regardless of psychological changes established one must assume that the constitutional tendency toward defective thyroid function remains. Consequently, surgery is probably preferable in many cases if we grant its limitations in being unable to change the more fundamental psychological maladjustment.

Concomitant Development: The association of hypothyroidism and mental symptoms is frequent, particularly in schizophrenia. Ivanowski[89] reported on 252 cases in which he found that 43.5 per cent of the schizophrenics and twenty-three per cent of the manic-depressives had thyroid hypertrophy. Vanelli[90] tried out the Kottman test on 328 schizophrenics and found that ninety-four per cent of them had a hypothyroid reaction, three per cent normal, and three per cent hyperthyroid. This test, however, has been shown to indicate only the transient emotional state at the time of examination.[91]

It has been suggested that hyperthyroidism is associated with agitated states and hypothyroidism with apathetic states,[92] though there is nothing further than basal metabolic studies to support this. Hoskins and Sleeper[93] found that ten per cent of 130 schizophrenics treated with thyroid substance improved, suggesting this etiological role in six per cent of the cases. Freeman[94] reported that one out of six or seven cases of schizophrenia is associated with hypothyroidism and tends to clear with treatment.

It is often impossible to state whether the psychiatric picture or the endocrine picture is primary. A typical case of schizophrenia with hypothyroidism follows:

Case 18. No. 4357. Male aged thirty-four. He was hospitalized because of pathological complacency and contentment and complete dependence and inactivity. He had progressed through high school and university where he majored in chemistry, making good grades. He was forced into medicine by his father's desire and finished in three and two-thirds years with superior grades. He developed a complaint of cardiac palpitation and distress, insisting that he had angina pectoris, though there were no organic findings. For the next four years he remained at home, apparently quite satisfied, complacent, making no effort to work or study; he became increasingly irritable and intraverted. His father, a domineering tyrannical man, had one of his periodic altercations with the patient who then

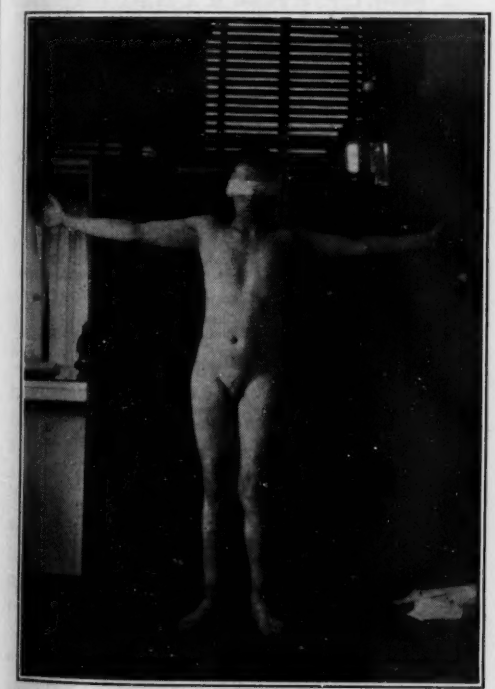
struck him; following this he had the patient committed. Physical and neurological examinations were normal; basal metabolic rate was minus 40. Psychiatrically he was undoubtedly a hebephrenic type of Schizophrenia.

## GONADAL DISTURBANCES

It is often impossible to state whether disturbances in secondary sexual characteristics are of gonadal or pituitary origin and the relationship is a very intimate one. At least two types of primarily gonadal disturbances have characteristic mental pictures: castration, and the menopause.

In castration the picture varies, depending upon the age at the castration which may be surgical or inflammatory. When this occurs at or before puberty an effeminate personality develops, the voice fails to change, there is a tendency to female body configuration, and a failure of the secondary sex characteristics to develop. This effeminate character is often complicated by fears and a feeling of inferiority as indicated in the following case.

Case 19. No. 2532. Male aged twenty. At age twelve it was noted that the sexual organs of the patient had failed to develop. He had a high-pitched voice and there was no facial or pubic hair; the hips were broad. There was a high sugar tolerance. X-ray examination showed a shallow sella. He had a fear of impotence. Height was five feet seven and one-half inches; weight 150 pounds.



Case 19. No. 2532.

When castration occurs after puberty in males obesity develops and there are subtle changes in the personality tending toward effemininity.[95, 96, 97, 98]

The climacteric is observed in both men and women. The consensus of opinion at the present time is that the physiological changes can be regarded only as precipitating any major mental change at this time, and there is no characteristic mental picture.[99, 100, 101] There have been extravagant claims for recent preparations in the treatment of the menopause mental changes with ovarian and corpus luteum hormones,[102] but a very conservative attitude is maintained by most physicians in their experience with these preparations.

Primarily Psychiatric Disorders: In all forms of mental disorder there is a high frequency of menstrual irregularity. It is possible that this is in part due to the influence of emotional factors on the pituitary or thyroid gland, but it seems more probable that the influence is exerted directly on the gonads. There is a tendency for the menstruation to be regular in the manic states, reduced or even absent in depressions, irregular in the acute schizophrenias, and normal in the chronic schizophrenias.[103, 104]

An arrest in the development of primary sexual functions as well as secondary sexual characteristics has frequently been noted in schizophrenia by Allen and Henry.[103] Tiffany [32] found changes in the testicles on pathological section in eighty-seven cases of schizophrenia. In the juvenile type of paretic neurosyphilis the menstrual function often fails to develop or may cease; there may also be failure of the genitals, breasts, and pubic hair to develop.[105]

The somatic build of homosexual individuals tends to be that of the opposite sex: The males develop a female distribution of pubic hair, have a high voice, and deficient facial hair, and have small genitals; females tend to develop a male distribution of pubic hair, excessive hair on the face, a small uterus, underdeveloped breasts, excessive hair on the chest, and a low pitched voice.[106]

## SUPRARENAL GLAND DISTURBANCES

Primarily Endocrine Disorders: Both because of the rarity of the endocrine syndrome and gross mental changes associated with it, comparatively little has been written on the mental picture as seen in Addison's disease, suprarenal tumors, and the pituitary-adrenal

disease of Cushing. That mental changes do occur in all of these is established and occasionally even psychoses are apparent in the basophilic adenoma picture described by Cushing.

Primarily Psychiatric Disorders: Following the brilliant work of Cannon it is now well established that through emotional responses the adrenal glands are stimulated in such pictures as anger and fear—the primitive defense reactions. As a result of the additional adrenalin secreted the usable glycogen is mobilized, the blood pressure is increased and other characteristic changes occur in response to the emotional stimulation. It has been suggested that the chronic picture of fatigue and low blood pressure seen in certain psychoneurotic pictures is due to adrenalin insufficiency.[107] Fair therapeutic results have been obtained by denervation of the adrenal glands in the psychoneurotic syndrome called neurocirculatory-asthenia.[108]

There is an extremely dubious relationship between various psychological pictures and the adrenal glands although there are reports of the successful treatment of the exhaustion manic-depressive pictures with suprarenal extract,[109] and psychotic pictures in which the "adrenal is dominant" in the disturbance.[110]

## PARATHYROID DISORDERS

Primarily Endocrine: Tetany is rarely associated with a characteristic mental picture though it has been a subject of special study in this relationship, particularly as it relates to post-operative tetany.[111] A clinical syndrome of fatigue, slow growth and conduct disorder in adolescence with a blood calcium below 7.0 mgm. has been described[112] which responded to hormone therapy.

Primarily Psychiatric Disturbances: There is no clear cut mental picture although a report of good results in the treatment of catatonic states with parathyroid extract has been published;[113] this, however, was not verified by later workers.[114]

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# HYPERINSULINISM DUE TO ADENOMA OF ISLETS OF LANGERHANS

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The description, by Seale Harris,[1] 1924, of spontaneous hypoglycemic states called our attention to a previously unrecognized disease syndrome. Since that time many case reports and discussions have appeared in the literature. This condition has been recently adequately reviewed by.[2, 3, 4, 5, 6, 7] Spontaneous hypoglycemic states closely simulate the clinical picture of exogenous insulin reactions. Tedstrom[6] lists twenty-eight conditions which may cause spontaneous hypoglycemia. At the present time most of the cases which come to our attention, because of the hypoglycemic symptom complex, are classed as pancreatic in origin. True primary hyperinsulinism is due to either adenoma, carcinoma, hypertrophy or hyperplasia of the islets of Langerhans; another of pancreatic origin may be classed as functional or neurogenic.

In 1926, Warren[8] reported fifteen cases of islet cell adenomas from the literature and added four cases; since that time others have been added. The significance of these tumors was not definite until 1927 when Wilder[9] proved that hypoglycemia could be due to a tumor of the islets of Langerhans.

The first successful operative removal, with relief of hypoglycemic symptoms, is accredited to Howland and associates[10] in 1929. There are now ten cases reported of successful removal of adenoma of the islets of Langerhans, five at Barnes Hospital, St. Louis (Fisher two cases and Graham three cases),[11] others are Ross and Tomasch,[12] Bast et al,[13] Cushing[14] and two cases by Judd, Allen and Rynearson.[15] One of the cases reported by Judd and one reported by Graham[2] had two separate islet tumors present.

The following case is reported because the clinical picture manifests almost all the signs and symptoms of hypoglycemia, and cure followed the removal of an adenoma of the islets of Langerhans.

## CASE REPORT

R. H., white female, age fifty-seven years, weight 158 lbs., height five feet, two inches. Complaint: Attacks of weakness and dizziness followed by convulsions and unconsciousness. Family History: Irrelevant. Past History: Patient had always been somewhat obese but had gained weight more rapidly since menopause two years ago. She had a craving for sweets and had been eating large quantities of carbohydrates for years prior to this illness. Present Illness: She enjoyed good health until February, 1934, at which time she began to have attacks of weakness and dizziness on arising in the mornings, occurring two or three times weekly and subsiding after breakfast. Within a few weeks attacks were accompanied by sweating, mental confusion, blurring of vision and moderate disorientation, making it almost impossible to dress herself and prepare breakfast. Gradually the attacks became more frequent, of longer duration, and occurred during the day, especially while preparing meals. In April,

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1934, she discovered that she could ward off or reduce the frequency and severity of the attacks by keeping her stomach full of food.

While she was cooking a noon meal, in June, 1934, an attack came on her which progressed to unconsciousness lasting about two hours. During this month and thereafter she says that she felt miserable all the time because she had to keep her stomach so full of food. In July the attacks rapidly increased in severity and frequency and during the last few weeks she has been having one to three mild attacks a day with three to four major attacks a week. On one occasion the stupor and unconsciousness lasted about eight hours.

Further questioning of the patient and her daughter revealed that the usual sequence of events for a characteristic attack consisted of a peculiar empty feeling in the stomach, weakness, dizziness, sweating, cold hands and feet, numb sensation in hands, lips and tongue, "thick tongue" with difficulty in speech, blurring of vision and often diplopia, profuse perspiration, mental confusion, disorientation, stupor, crying out, frothing at mouth, tonic and clonic convulsions, and coma. Most attacks were more mild and were varied in the sequence of symptoms; also there might be any number or combination of the above symptoms. The duration of symptoms varied from a few minutes to several hours. Her family had observed that the severity and frequency of the attacks bore a definite relationship to the patient's physical and mental activities. She was usually emotionally unstable, i.e. nervous, cried easily, and at other times was maniacal.

She had been observed by osteopathic physicians. Her family had finally concluded that she had epilepsy and probably was insane. She was admitted to the Medical Department of the University of Kansas Hospital for diagnosis.

Physical Examination: White female, age fifty-seven, height five feet, two inches, weight 158 lbs. Well developed. Feels well and does not act or appear to be sick. Physical examination revealed no abnormalities, temperature ninety-eight, pulse seventy-six, blood pressure 118/60, heart not enlarged, no murmurs, and reflexes normal.

Admission Laboratory Findings: Urine negative. W.B.C. 8,200; R.B.C. 5,290,000; hemoglobin 84 per cent; Blood chemistry: N.P.N. 33.1 mgm. per cent; creatinine 1.7 mgm. per cent; sugar 55.5 mgm. per cent; $CO_2$ combining power 52.3 vol. per cent; Wassermann and Kahn negative.

Diagnosis: Hypoglycemia probably due to adenoma of the islands of Langerhans.

The evening of admission patient was stuporous and would not respond well. Blood sugar was 55.5 mgm. per cent. The next morning she was confused, at which time blood sugar was 34.4 mgm. per cent. In one hour she was in a delirious state and crying out. The findings were, respiration, pulse and temperature normal, blood pressure 130/90, generalized spasticity of all muscles, tremor, frothing at the mouth, profuse clammy perspiration, bilateral Babinski sign, blood sugar 39.5 mgm. per cent. Patient was given 45 c.c. of 50 per cent glucose intravenously and within five minutes was rational, but crying; she walked to the bath room and within a few minutes appeared to be normal.

She was observed for a period of fifteen days, during which time she had from several minor attacks to one or two severe ones daily, varying in intensity from nervousness and visual disturbance to convulsive seizures followed by coma. The Babinski sign varied, being positive in some attacks and negative in others. Many attacks were prevented or rendered mild by giving the patient orange juice. She was allowed to have a quite severe reaction daily and always showed a prompt recovery following intravenous glucose (20 to 50 c.c. of 50 per cent solution), and on one occasion responded to 8 minims of adrenalin.

For four days this patient was given a high fat diet, the first two days carbohydrates 100 gms., proteins 60 gms., fat 260 gms., then for two days carbohydrates 100 gms., proteins 60 gms., fat 350 gms. On this diet she had only a few minor reactions and required oranges only once daily and no intravenous glucose.

Because of the severity and frequency of the patient's hypoglycemic reactions it was deemed advisable to do an exploratory operation.

Operation: 8/23/35. Pancreas exposed and explored. A small indurated nodule about two cms. in diameter, which seemed to be encapsulated, was removed from the head of the pancreas. No other nodules or abnormalities of the pancreas were noted. Uneventful postoperative recovery without any signs of hypoglycemia.

She was given 200 grams of glucose by mouth during the two hours preceding operation and at the time of operation blood sugar was 91 mgm. per cent; immediately following

operation blood sugar was 202 mgm. per cent and three hours later 250 mgm. per cent. Table I gives the morning fasting blood sugars following operation (no glucose medication required).

TABLE I. Morning Fasting Blood Sugar.

| Pre operative day | Blood Sugar | | Post operative day | Blood Sugar | |
|---|---|---|---|---|---|
| 14 | 55.5 | mgm. % | 1 | 300 | mgm. % |
| 13 | 34.4 | " " | 2 | 187 | " " |
| 12 | 29.5 | " " | 3 | 132 | " " |
| 11 | 45.85 | " " | 4 | 124 | " " |
| 10 | 50.0 | " " | 5 | 113 | " " |
| 8 | 52.6 | " " | 6 | 96 | " " |
| 7 | 51.25 | " " | 7 | 131 | " " |
| 6 | 34.8 | " " | 8 to 16 | 101 to 146 | " " |
| 5 | 54.5 | " " | 180 | 129 | " " |
| 4* | | | 207 | 129 | " " |
| 3* | 71.0 | " " | | | |
| 2* | 73.0 | " " | | | |
| 1* | 81.0 | " " | | | |
| 0 | 65.0 | " " | | | |

*High-fat low-carbohydrate diet.

Pathological Report: Gross—ovid mass of tissue, measuring 2 x 1.3 x 1.5 cms.; it is irregular and bosselated, gray in color, covered by numerous fibrous tags in which some granular appearing tissue is found. Cut section shows a cellular gray mass surrounded compleely by at thin fibrous capsule. A small amount of dense fibrous stroma is seen.

Histological Pathology: Section shows some pancreatic tissue which is largely replaced by a rather atypical and irregular mass of glandular tissue that is pushing the normal pancreatic tissue over to one side. The abnormal cells seem to be more or less oval or rounded, and polyhedral in shape. They are frequently arranged in acinar formation and show considerable amount of cytoplasm and are frequently separated from each other by interlacing bands of fibrous tissue. The cytoplasm is also rather pale and appears to be rather vacuolated. In some places the outline of the tumor cells is rather indistinct and blends with the stroma. The general structure in some places approaches that of acini in some fields and in other places it appears to be more of the character of the islands of Langerhans, the cytoplasm being deeper eosin staining and showing darker, more hyperchromatic appearing nuclei, particularly in those areas where the tumor tissue in adjacent pancreatic cells have the appearance of large hypertrophied islands infiltrating into the normal tissue. It is interesting to note that in some places the tumor cells seem to blend into the walls of veins or lymph vessels without any sharp transition in either the adjacent acinar epithelial cells or of the island cells.

**Fig. 1. Low power, photomicrograph of the adenoma of the Islands of Langerhans. The upper one-half shows a more cellular area while the lower portion shows more hyalinization and fibrosis, which is the predominate tissue of this tumor.**

In other fields the stroma plays a much more prominent part while poorly defined clusters and nests of tumor cells can be seen embedded here and there. The stroma is so prominent as to break up the tissue into poorly defined lobules. The tumor cells frequently show considerable degeneration and distintegration. Mitotic figures are occasionally seen but are not prominent or very numerous.

Diagnosis: Adenoma of the pancreas probably derived from the islands of Langerhans.

## LABORATORY STUDIES

TABLE II. Oral glucose tolerance (1.5 gms. of glucose per kilo body weight) Readings = mgm. %

| Time | Before Operation | 20th Post-operative day | 60th Post-operative day |
|---|---|---|---|
| Fasting | 34.8 | 112 | 100 |
| 1st hour | 183 | 137 | 165 |
| 2nd hour | 165 | 173 | 120 |
| 3rd hour | 165 | 182 | 112 |
| 4th hour | 129 | 167 | 92 |
| 5th hour | 76 | 108 | 103 |
| 6th hour | .... | .... | 94 |

TABLE III. Continuous intravenous glucose tolerance* (Rate — one gram per kilo body weight per hour)

| | Blood Sugar | | Urine Sugar | |
|---|---|---|---|---|
| Time | Before Operation | 20th Post-operative day | Before Operation | 20th Post-operative day |
| Fasting | 29.5 | 133 | 0 | 0 |
| 10 min. | 110 | ..... | 0 | 0 |
| 20 min. | 138 | 363 | 0 | 0 |
| 30 min. | 162 | ..... | 0 | Trace |
| 40 min.† | 197 | 319 | 0 | 0.3% |
| 50 min. | 209 | ..... | 0 | 0.4% |
| 60 min. | 244 | 315 | Positive | 0.8% |

*Controlled gravity method used for giving the glucose at constant rate.

†Glucose via veins stopped.

## DISCUSSION

This patient presents several features worthy of mention. The wide array of protean symptoms and findings in this case make it very instructive, as almost all the symptoms and signs variously ascribed to spontaneous hypoglycemia are present. It is only necessary for one to review the picture presented by this patient to glean a comprehensive clinical understanding of the hypoglycemic syndrome, i.e. weakness, hunger, dizziness, sweating, emotional upset, cold hands and feet, numbness of extremities, lips, and tongue, thick tongue with difficulty in speech, incoordination of muscles, blurring of vision, diplopia, mental confusion, disorientation, tremors, convulsive seizures simulating epilepsy, stupor and coma simulating narcolepsy, also positive Babinski. Some of the minor attacks were suggestive of petite mal. The attacks were precipitated by lack of food and fatigue, and relieved by supplying food or glucose. It must be remembered that this patient is unusual and that only a small percentage of the cases present such a large number of symptoms. Tedstrom,[6] 1934, has reported a numerical analysis of symptoms presented in hypoglycemia; also the reader is referred to Rynearson and Moresch[4] for discussion of the neurological aspects. The latter state concerning hypoglycemic cases that "all had neurological symptoms of one type or another." It is not difficult to understand why many patients may be wrongly thought to be suffering from psychoneurosis, neurasthenia, hysteria, narcolepsy, epilepsy, alcoholism, brain tumor, and occasionally cerebral apoplexy as hemiplegia may be present when the patient is seen. This patient was thought to have epilepsy and to be insane.

This patient was only given a short period of medical therapy, with marked abatement of symptoms. This regime consisted of a high-fat diet with orange juice and glucose to relieve attacks. Prior to this she had been having one to two severe seizures daily with intervening mild symptoms, requiring frequent administration of orange juice and intravenous glucose, whereas on this regime orange juice was required infrequently, two of the four days none was given, and no intravenous glucose. This period of observation was not long enough to draw any definite conclusion but it supports the findings of others that high-fat, low-carbohydrate diet with frequent feedings is the most efficacious medical method of management of cases of hyperinsulinism. Harris used this treatment early in his experiences. This is explained by the physiological fact that "fats have a definite inhibiting influence on the abnormal process responsible for the glycopenic syndrome" (Shepardson.[16]) We have two patients now under observation who are satisfactorily controlled by the high-fat low-carbohydrate diet.

That glucose acts as a stimulant to the pancreas to augment the flow of insulin is illustrated by this case. It was observed that when glucose was given by mouth or by venoclysis, as for glucose tolerance curves or for therapy that the intervals between attacks were shorter and reactions more severe.

The glucose tolerance as determined by the oral administration of glucose is in keeping with the fact that there is no definite type of curve for hyperinsulins. Excluding the low fasting blood sugar the patient's curve shows a mild decreased tolerance both before and after operation, the only difference being that the drop was more rapid after the peak and was more rapid before operation than following operation, Table II.

The continuous intravenous glucose tolerance curves, Table III, show that this patient had a greater tolerance for sugar before the operation than after. The method for intravenous glucose tolerance was developed by Woodyatt et al[17, 18] who give the normal velocity as 0.85 mgm. glucose per kilogram of body weight per hour. In this case the upper limit of tolerance was not determined but one gram per kilo per hour was tolerated before operation whereas the same amount following operation gave a much higher glucose curve with sugar in urine at 30 minute period. We have employed this method in studying other cases of hyperinsulinism and find it more satisfactory than the oral method. This is also the opinion expressed by Ziskind[19] who found decreased tolerance by the oral method with increased tolerance by the Woodyatt method.

We believe that this case has been permanently cured unless she develops another adenoma, and as yet recurrence has not been reported. She has been under observation for ten months with no recurrence of symptoms and blood sugar has remained normal.

## CONCLUSION

1. A case is reported of hyperinsulinism due to an adenoma of the islets of Langerhans with

cure following the surgical removal of the adenoma.

2. Brief discussion is given relative to medical therapy, high-fat, low-carbohydrate diet, and oral and intravenous tolerance curves.

3. This case is of unusual interest in that it presents almost all the findings and symptoms of the hypoglycemic syndrome embodied in one case.

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# MALIGNANT EPITHELIAL TUMORS OF THE OVARIES

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Interest in this subject was aroused by the admission to Stormont Hospital, Topeka, Kansas, within a period of several months, of four patients having malignant tumors of the ovary, one of whom had been observed elsewhere for about six months as a case of pregnancy. These facts brought to mind the realization that ovarian malignancy is not a rarity, but a condition to be considered more frequently in cases of ovarian enlargement.

## ETIOLOGY

The etiology of carcinomatous tumors of the ovary is unknown. The exact origin of the primary cells is not known, but the most generally accepted theories at the present are that the malignancy arises from some type of developmental anomaly. Chronic inflammatory conditions, trauma, and occupational and environmental conditions do not seem to be of any particular importance. Some writers say that these tumors occur predominately in married women, but that pregnancy is seldom present coincidentally, and, in parous women, has antedated the tumor by a number of years. Malignant ovarian tumors have been known to occur at any age from four to sixty-nine years, the highest percentage occurring between the fortieth and the seventieth years of life.

## DIAGNOSIS

On the basis of clinical diagnosis malignant ovarian tumors are divided into two groups. First there are those large enough to present definite symptoms and physical findings. The second group includes those small tumors either causing no symptoms at all, or only very indefinite ones, and being very difficult to detect on bimanual examination.

Small, to moderate sized, freely movable cystic tumors, are those most easily diagnosed by bimanual examination, because of their position, mobility, and cystic characteristics. Large tumors simulate more closely other intra-abdominal tumors. Notwithstanding this fact, findings on palpation are of the utmost importance for a basis of diagnosis, as symptoms are quite worthless in the differentiation. Ovarian tumors as a whole are more sensitive to pressure than other tumors of the abdomen, squeezing eliciting pain which frequently radiates down the anterior surface of the homolateral thigh to the inner side of the knee. This radiation of the pain is often a subjective symptom in large rapidly growing malignant tumors of the ovary. It is also a valuable sign in determining whether a mid-line tumor may arise from the right or the left ovary.

The two most distinctive findings from the standpoint of physical examination are the cystic consistency and the pedunculate attachment of the tumors to the uterus. In the presence of both of these findings one is justified in making a diagnosis of ovarian cyst. However many ovarian tumors are fixed, either by adhesions or by sub-peritoneal extension of the

growth. In general, solid tumors especially of the malignant variety, form short pedicles because they tend to grow towards the mesovarium, while simple ovarian cysts and dermoids have long pedicles and tend to gravitate into the cul-de-sac. Small tumors are usually round or oval but the larger tumors, either cystic or part solid, may assume any shape.

In differential diagnosis we will divide ovarian tumors into three groups, according to size. Small tumors must be differentiated from inflammatory masses and fibroids. Small ovarian tumors are usually freely movable and symptom free as contrasted to inflammatory masses which are associated with pain tenderness, fever, fixation, increase in leucocyte count, and increase in the sedimentation rate. Fibroid tumors are differentiated by their consistency, connection with the uterus, or if pedunculated, by their longer pedicles.

Moderate sized tumors may be confused with encapsulated ascites or peritoneal exudate. These are very slightly movable, and more irregular in outline. Omental tumors are characterized by their marked mobility in all directions. A distended bladder is ruled out by lack of dribbling, or desire to urinate upon pressure, and by catheterization. Uterine pregnancy is differentiated by its central position, amenorrhea, symptoms of pregnancy, absence of the uterine body upon bimanual examination, and a positive Friedman test. Ectopic pregnancy is differentiated by the greater tenderness of the mass, and its tenderness to float anteriorly.

Large ovarian tumors are characterized by enlargement from below upwards, the mass upon examination being both abdominal and pelvic. There is frequently an associated ascites with these larger lesions. Tumors of the kidney are ruled out by urine examination and urography.

Diagnosis of malignancy in an ovarian tumor may, in some cases, be made on the basis of the loss of weight and strength, bilateral and equal sized tumors, and ascites. However, in most cases removal of tissue for microscopical examination is necessary for a definite diagnosis of malignancy.

PATHOLOGY

1. Cystic Carcinoma of the Ovary, or Papillary Cystadenocarcinoma: These tumors may be either primarily malignant cysts, or a malignant degeneration of a previously benign papillary cystadenoma. In gross appearance they are practically the same—cystic tumors, usually bilateral, varying in size but usually not more than 10-15 cm. in diameter, often having papillary projections outside the main cyst wall, and usually with numerous papillary projections into the cyst cavity. These projections may be so proliferative as to entirely fill the cyst cavity. Gross differentiation from a benign papillary cystadenoma may be impossible. Regional transplantations to the peritoneum, and extensions into neighboring organs (broad ligaments, uterus, vagina, rectum) are quite frequently found at the time of operation. The fluid of the cyst cavities in the smaller tumors is usually clear, while in the larger cyst it may be turbid because of epithelial desquamation, and occasionally is even hemorrhagic. Microscopically there are in the cyst wall areas of typical adenocarcinoma, mixed with areas which are benign. The papillary growths are covered with many layers of rapidly growing, invasive, polymorphic epithelium, which forms cohesions between the various papillae. There is a great variation of both the form and the staining properties of the epithelium of these tumors. The stroma of the papillae is made up of a poorly cellular fibrous tissue in most instances, though occasionally one will be so cellular as to resemble sarcoma. There are frequently areas of calcification either in the papillae or the wall, consisting of concentric layers of calcified tissue, called psammoma bodies. Metastases in the sense of blood stream or lymphatic metastases, are not common, though they do occur. The most common means of spread of these lesions is by direct extension, or by implantation of secondary tumors in the peritoneal cavity from breaking off of papillae, or rupture of the cyst wall and dissemination of the fluid.

2. Primary Solid Carcinoma of the Ovary: These tumors are less common, making up about fifteen per cent of ovarian carcinomata. They may be medullary, alveolar, scirrhous, or transitional between these types. They are seldom larger than an infant's head, and usually maintain approximately the normal shape of the ovary. They are bilateral in about fifty per cent of the cases. The tumors are at first free, with a short pedicle, and then become adherent. Torsion of the pedicle is uncommon. Grossly the tumor is irregularly rounded, a grayish pink color, and large veins can usually be seen coursing beneath the surface. In the later

stages there may be ulceration through the capsule. The cut surface is of a yellow gray color, and there are embedded areas made up of carcinomatous cells in an edematous connective tissue. There may be small cysts, resulting from necrosis, and consequently lined by a soft friable tissue. The tumor may be mottled with hemorrhagic areas, giving it an appearance resembling marble. Microscopically the larger number are alveolar carcinomata, with small solid cords of polygonal or irregular epithelial cells in a fine connective tissue network. If there is rapid enough growth so that there is no alveolar formation, it may look somewhat similar to a round cell sarcoma. The medullary type is made up of small polyhedral or rounded, opaque, granular cells, arranged in broad columns which may anastomose in their growth. The scirrhous type is made up mostly of dense fibrous tissue, in which are embedded small nests of single cords or epithelial cells.

3. Solid Teratomata of the Ovary: Tumors of this group are distinguished from the dermoid cysts by their origin from all three germ layers instead of from one, and by the absence of the cystic cavities containing hair, special organs, and sebaceous material as found in the dermoids. Grossly teratomata consist of solid tumors, attaining the size of a man's head, and often extending to the retroperitoneal glands, and the intraligamentous areas. There are usually numerous small cysts scattered through the tumor but they do not make up one large cavity as in the dermoids. Microscopically there are cells from all three germ layers, growing in a helter-skelter fashion, and some abortive structures corresponding to those found in a more fully developed state in the dermoids—cellular cartilage, pigmented retinal tissue, osteoid tissue, and embryonal teeth germs, similar to those in the adamantinoma. They are all characterized by the malignant embryonal type cells, and the cellularity of the stroma in which they are embedded. Their growth is usually rapid, and they metastasize frequently, though in the secondary tumor there are not necessarily found all the elements of the primary lesion.

4. Metastatic tumors of the Ovary: There are found various types of secondary tumors in the ovaries, but the most common is the so-called Krukenberg tumor. First described as a bilateral primary tumor, it is now generally conceded to consist of bilateral metastases from some primary growth elsewhere—gastro-intestinal tract, breast, thyroid, etc. The tumors may be the size of a fist, or even larger, and are composed of a stroma of spindle cells and connective tissue of various sorts, with edematous, myxomatous and necrotic areas. Embedded in this stroma are epithelial cells which secrete mucous, and characteristically they are stretched out to form the "signet ring" cells, with the nucleus pushed clear to one side of the cell by the collection of the secretions within the cell itself. These tumors are of course always fatal, since they are all metastatic.

There are, in addition to the above mentioned types of malignant tumors, numerous other types which occur more rarely, and these will not be considered here. Among these are the granulosa cell carcinoma, the folliculoma malignum ovarii, the germ cell carcinomata, luteoma, and others.

## TREATMENT

There is very little that is encouraging to say of the treatment, either operative or radiation, as it is quite unsatisfactory at best. Because of the possibility of malignant degeneration of the papillary cystadenoma or even of the serous and pseudomucinous cystadenomata, operation is indicated for any case of ovarian tumor as large as one's fist or larger, even though malignancy is not suspected, and may not be present. The operation of choice, for malignant lesions of the ovary, is supravaginal hysterectomy, with bilateral salpingo-oophorectomy, thus removing as many of the paths of extension as is practical. The possible exception is in young women in whom it is desired to preserve the child bearing function. Against this conservatism, however, it must be remembered that there are reported cases when a malignant tumor of the ovary has been removed, leaving an apparently normal ovary on the other side, only to have development of a similar tumor on the opposite side at a later date.

In cases too far advanced for complete removal of the growth, because of transplantations to the peritoneum or extension beyond the scope of excision, removal of the primary tumor will usually give some temporary relief, and may at least give the patient a little more comfort for her remaining days. Then there are a few authentic cases of "cures" following removal of the primary lesion only, in the face of metastases to the peritoneum and neighboring organs.

It is important to try to remove the tumor without spilling any of the cyst contents, be-

cause there may occur secondary growths from the dissemination of the fluid. If the cyst is ruptured, the spilled contents should be cleansed out as thoroughly as possible.

The only other treatment to be considered is radiation following operation, or in those cases where operation is deemed impossible. Radium has been of no apparent value in these cases, and x-ray has not been at all encouraging. It probably gives some temporary relief in some cases, but has been quite disappointing as far as any real arrest of the growth is concerned. These patients usually run a down-hill course, developing ascites, pain from extension into nerve trunks, and obstipation from involvement of the gastro-intestinal tract.

Recurrence following operation is very common as is shown by practically all the published statistics. The series of Pfannenstiel, Fromme, and Hofmeier, which were quite large series, showed a recurrence in eighty-three per cent of the papillary carcinomata, and in sixty-six per cent of the solid cancers after operation. The recurrences were higher where the lesion was bilateral, being found in ninety per cent as compared with from forty-three to fifty per cent in those having only one-sided involvement. The cures were only 14.6 per cent.

The following cases were all operated by Dr. W. M. Mills, of Topeka, and we wish to express our appreciation of the opportunity of reporting them here.

Case No. 1. White married woman, forty-six years of age, was admitted to the hospital on May 6, 1934. She had had more than her usual menstrual flow for several months, and in February 1934 had had an attack of severe abdominal pain. Examination at that time revealed an adnexal mass on the left side the size of a man's fist, and operation was advised then, but refused. She never was completely free of pain after this acute attack. For the last month before admission there had been noticeable growth of the mass. Examination on admission showed a large lower abdominal mass, rounded in shape, and rising from the pelvis to a level above the umbilicus. Blood and urine examinations were normal. On May 7, 1934, under ether anesthesia the abdomen was opened through a mid-line suprapubic incision. A multilocular cyst about eight inches in diameter had replaced the left ovary, and the right ovary was cystic though smaller. In the wall of the larger cyst were numerous adenomatous areas, and the contained fluid was bloody. A supravaginal hysterectomy with bilateral salpingo-oophorectomy was performed. The microscopical diagnosis on the tissue was adenocarcinoma. The patient had considerable difficulty in voiding after her operation, and on her eighth post operative day had an attack of paroxysmal tachycardia lasting eight or ten hours, with a pulse rate of about 220. Otherwise her convalescence in the hospital was normal, and her wound healed well. She was discharged on the thirteenth postoperative day. About eight months later she died of carcinomatosis.

Case No. 2. White married woman, thirty-six years old, entered the hospital on September 23, 1934, with a preliminary diagnosis of pregnancy. She had had no serious illness and her past personal and family history were both negative. She had had two previous pregnancies, going to term, with normal deliveries, and living children. No miscarriages.

In January, 1934, she began to feel tired and pepless. This was associated with some nausea. Three or four months following this onset, she began to notice an enlargement of the lower abdomen, regular in contour, and in the mid-line. She thought that she was pregnant although she had had some irregular bleeding each month. Enlargement of the abdomen continued at about the rate expected in pregnancy, and at times she thought that she was able to feel movement, although never the activity that she had experienced with her other pregnancies. She was examined by a physician and he concluded that she was pregnant, and thought that he was able to hear the heart tones. In June, about three months before admission, she began to have sharp shooting pains down the legs, which would come on at first after some type of movement, but later might come on at any time. For the last six weeks both legs had been markedly edematous, and she had been confined to bed, and had quite a rapid pulse rate. She was sent into the hospital with a diagnosis of decompensated heart complicating a term pregnancy.

Physical findings were: An undernourished female about thirty-five years old, appearing rather acutely ill, and markedly dyspneic. There was slight enlargement and tenderness of the breasts, and milk could be expressed from either breast. Heart was normal size, rate 110, rhythm regular, and no murmurs. Lungs were negative for moisture or dullness, the breathing shallow and rapid. The abdomen was dis-

tended to about the size of a term pregnancy. There was moderate bulging of both flanks. There was a large regular tumor mass about the size of a term pregnancy in the mid-line. This tumor mass had a peculiar feeling of resiliency and not the intermittent contraction and relaxation of a gravid uterus. No heart tones could be heard, and no fetal parts were detected. There was a definite fluid wave in the abdomen. Vaginal examination was not made, but by rectal examination the cervix was high and firm. The uterine fundus was not palpated. Both lower extremities were markedly edematous and tender, and she could move only with difficulty. Laboratory findings: Hemoglobin, sixty per cent, R.B.C. 3,840,000, W.B.C. 9,950. Urine was negative except for a trace of albumen. Blood urea 49.2 mg. per 100 cc. Blood Wassermann negative. Friedman test negative, and x-ray of the abdomen negative for any pregnancy.

With rest in bed her general condition improved enough to warrant operation, and this was performed on September 29, 1934. A large irregular, nodular, cystic tumor measuring five by eight by twelve inches was found arising from the left ovary. There were extensive transplants on neighboring peritoneal surfaces. The right ovary was adherent to the main mass, and there was some question of involvement on this side. The left ovarian mass was removed, no more being taken because ef the extensions. The microscopical diagnosis was malignant teratoma. The patient made an uneventful convalescence in the hospital.

She was seen in July, 1935, and was feeling well, had gained thirty-five or forty pounds in weight, and had no evidence of recurrence to either abdominal or vaginal examination.

Case No. 3. This patient is a white married woman, forty-four years of age, admitted on October 24, 1934. About three months before admission she had noticed she was losing her pep, and was not able to work as she had been accustomed. There was some bearing down in her pelvis, and a low backache. For the past five or six weeks she had noticed an enlarging mass in her lower abdomen. There was no loss of weight, and no menstrual disturbance. The only thing of significance in her past history was that she had her right breast removed three years before for a benign tumor. Examination at the time of admission showed a large abdominal mass, filling the lower half of the abdomen, and reaching above the umbilicus on the left. This mass was soft, and fluctuant in parts. It was thought to arise from the left ovary, as the uterus could be separated from it on vaginal examination. Blood and urine examinations were normal. On October 25, 1934, under spinal anesthesia, the abdomen was opened through a long mid-line incision extended up to the left of the umbilicus. Arising from the left ovary was a multilocular cyst, about the size of a six months pregnant uterus, with numerous areas through the wall where there was thickening and hyperplasia. A supravaginal hysterectomy, and bilateral salpingo-oophorectomy was performed. The microscopical diagnosis was adenocarcinoma. On her third postoperative day, she developed a paroxysmal tachycardia with a pulse rate of about 260 which lasted for about three hours. Otherwise her convalescence was uneventful, and she was discharged on November 10, 1934.

In August, 1935, she was seen, and she was not feeling as well as previously, she had lost a few pounds in weight, and was having some lower abdominal discomfort. Vaginal examination gave the sensation that there was some induration in the left broad ligament—probably a recurrence or a further extension of the original lesion.

Case No. 4. White married woman, forty-six, who was admitted to the hospital on April 19, 1935, with a rather vague history of menopausal disturbances—nervousness, hot and cold flashes, etc., which were relieved somewhat by administration of female sex hormones. Examination revealed a firm, cystic mass, about ten cm. in diameter, to the right of the uterus, and separate from it. The mass was somewhat fixed in its position. On April 20, 1935, under ether anesthesia, operation was performed, and a tumor ten cm. in diameter was found arising from the right ovary. This tumor was solid on one side, and cystic on the other. The left ovary was atrophic and adherent to the broad ligament and sigmoid. A supravaginal hysterectomy, with bilateral salpingo-oophorectomy was performed. The microscopical diagnosis on the tissue was malignant teratoma. Her convalescence was normal, and she was discharged from the hospital on May 4, 1935.

She was seen in July, 1935, and there was an improvement in her subjective symptoms, and examination revealed no evidence of any recurrence at this time.

This series of four cases, though being far

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# PRESIDENT'S PAGE

## PERIODIC HEALTH EXAMINATION

Periodic health examination was first suggested by Dr. Horace Dobell, an English physician, nearly seventy-five years ago, but met with no response. Then, in 1900, Dr. Geo. H. Gould read a paper before the American Medical Association, and his idea of periodic health examination also met with an apathetic reception.

But the seed was sown, and in 1923, the American Medical Association and the National Health Council, at the St. Louis meeting, officially endorsed the periodic health examination. The American Medical Association then proceeded to appoint a committee to outline procedures and to draft forms to be used in making these examinations. So satisfactory have been these blanks that very few changes have been made in the original draft, and these were very minor changes. These blanks can be obtained from the American Medical Association at a nominal cost.

Twelve or fifteen years ago, certain life insurance companies got the idea it would be a worthwhile experiment to offer their policyholders free examination at regular yearly intervals. These companies think that they are able to show that the experiment has been a paying investment, for the increased life expectancy of the policy holders has saved more than it has cost to make the examinations. Other industries have adopted the method and put it into operation with satisfactory results.

If this plan of a periodic examination is good for the classes, why is it not good for the masses? And why should not every physician and the members of his family undergo regular health examinations? This custom would prove more effective than any other method of educating the public to the periodic health examination idea. Example is better than precept every time.

Health examination is not merely a physical examination, but a general examination of the whole individual, including definite questions as to his work, play, sleep, exercise, diet, habits, and numerous other questions covering his entire family history. This detailed history of the individual may prove of the greatest importance for, although the results of the examination may be negative, the history may reveal the previous occurrence of a disease probably latent, the existence of which would be diagnosed, although the symptoms are absent.

It is important that a physician should inquire deeply into the life habits of the individual as many people have acquired habits that eventually cause disease, which if recognized and corrected, mean prevention of disease. If in the course of an examination, a physician finds any obscure conditions, he will surely request professional aid through consultation, or where there are indications for special laboratory procedure this will be arranged for as in all good medical practice.

These health examinations should be made by the family physician as we believe his knowledge and training, and the relationship which he bears to his patients, best fit him for this particular work. Also, by virtue of his position in the life of the family, it would be perfectly proper, and really his duty, to point out to the members the importance of a thorough check-up of their health at regular intervals.

And there is no better time to emphasize the importance of a periodic health examination in the prevention of disease than when a person is under the physician's care. Sickness makes a man appreciate health, and he will be much more receptive to suggestions and advice as to how to prevent diseases than when in good health.

The subject of periodic health examination has been introduced in the House of Delegates of the Kansas Medical Society at different times within the last decade, but, for various reasons, action in the matter has always been deferred. We believe that we have reached the time when some definite action should be taken, and that the subject should again be presented at the next annual meeting of our State Society; and that periodic health examination be endorsed by the House of Delegates in compliance with the recommendations of the American Medical Association.

The public will have to be educated to the importance of a periodic health check-up, as no laws can ever be enacted that will compel people to undergo an examination, and epidemics are not of a nature to cause many people to seek one. We believe that in such a program we will have the support and confidence of the people of our state, if we show them we are in earnest about periodic health examination, prevention of disease and conservation of health.

J. F. HASSIG, M.D.

# EDITORIAL

## THIS AND THAT

Support can be given to the Journal by the members of the Kansas Medical Society in several ways. One of these we recently mentioned in urging the support of our advertisers. Another and more important way is in making a practice of reading this publication each month thereby keeping abreast of state news, medical progress, and giving a rather heat-weary editorial staff its only reward.

Scientific articles of merit in the past have, as they should to a considerable extent, originated in the programs of our state meetings but such is not the case this year. So far only two papers have been secured from speakers at the Salina meeting although they were requested at the end of each talk. This situation should be forestalled at future meetings by requesting speakers at the time invitations are extended, to prepare their subjects for publication.

The Journal is faced with an even more serious crisis next year since the Council recently decided to abandon the 1936 state meeting entirely on account of the proximity of the A.M.A. session in Kansas City. If this plan is carried out the only way the Journal can maintain its scientific standard during these two years of literary stagnation is for our members to favor their own papers when submitting original articles for publication. We are in favor of maintaining both quality and quantity but if necessary will reduce the latter.

## PHYSICIANS AND THEIR JOURNALS

That too few doctors read their medical journals is a criticism often observed by medical men. Dr. M. A. Blankenhorn, retiring professor of clinical medicine, Western Reserve University School of Medicine, in his recent address to the graduating class, takes occasion to deliver advice to the young doctors, stating that older physicians do not seek or accept advice upon the point of keeping up with the progress of medicine. Dr. Blankenhorn is particularly interested in the doctor's company, his attendance upon society meetings and his reading habits.

The late Dr. Albert Ochsner stimulated reading among his internes and assistants by holding what he termed "Sunday School" every Sunday morning. Each man was required to report some important medical article he had read during the week. In this way Ochsner taught them to read journals, thereby creating an interest in current medical literature in the young men under his training.

It is not always the well read doctors who buy the most medical books. It may be a great temptation to buy attractive books from the agents, but the good students of medicine will have a well chosen selection on their shelves and worn by frequent handling. Medical journals will be read and reprints collected and filed with index for ready reference. The occasional reader is rather driven to recourse to books while the small minority of doctors who acquire good habits of reading become familiar with literature and are able to read more intelligently.

Some one has said that every patient should be an intellectual adventure. This can be truly so, only with those of scientific mind who possess the background of sound knowledge and an experience based upon scientific observation.

Dr. Blankenhorn estimates that only about one-third of doctors, after they are out in practice a few years, make any effort to keep up through reading and attendance at medical society meetings. He believes that through timidity, intolerance, jealousy, or indolence, doctors too often shun the companionship of their fellows which is necessary for liberal discussion of medical subjects. Such discussions every thinking physician knows to be essential to each man's development.

We once heard an eminent surgeon remark, "God deliver me from the doctor who wants to tell me about a case." The man who has a big story to tell about an unusual case every time you see him can become a bore to his fellows,

but earnest discussion is often productive of friendly helpfulness, whether in informal talk or in formal society meetings. Let us leaven the serious consideration of medico-economic problems with renewed zeal for the deeper interest of medicine. Doctors are not economists. In the trend of world forces, should our economic status be altered we shall still be doctors. We shall still have our incentive, the prevention of disease and the healing of the sick. Our security lies in this singleness of purpose.

## CONTRACEPTION BY "PERIODIC ABSTINENCE"

It has been said that notwithstanding all of the methods of conception control, the mistakes will keep the population of the world well up to average. No method is fool proof. Especially true is this of the present very much discussed contraception by rhythm. Publishers are hurrying to get books on the market about it, and rhythm is being discussed in popular magazines and at the bridge tables along with the NRA and Shirley Temple. Priests, ministers, neighbors, and social workers have become practicing physiologists. Already we are getting results of misadvice and no doubt soon will be getting them in greater numbers.

Essentially the Ogino-Knaus theory is that ovulation takes place between the twelfth and sixteenth day before the onset of the next menses and that this is the fertile time of a woman's cycle. Here comes the difficulty; the exact date of the next expected menstruation cannot always be accurately estimated. In other words the method is only applicable to the woman whose cycle is within bounds of a regularity which can be classified.

It is believed that the ovum is able to be fertilized by a sperm for twenty-four hours and that a sperm may have the ability to remain able to fertilize an ovum for forty-eight hours after being deposited in the vagina. Thus to the four days referred to above must be added one day taken from the twelve and three days added to the sixteen days before the next expected period, giving a possible fertile time of eight days. This leaves eleven sterile days before the next expected menses and accounts for nineteen days of the cycle. These days subtracted from the total days of the ordinary cycle leave the number of sterile days during the first part of the period. If the cycle is twenty-eight days, this leaves nine days. However, if the period lasts five days only, four days are left for intercourse and in proportion. It is obvious that any variation in the cycle will influence the number of sterile days during the first part of the cycle, and any inaccurate knowledge of the exact time of the yet-unknown expected period will upset the estimation of the fertile or dangerous days. Some good authorities are not so sure of their physiology and think the preovulation days are only "practically sterile" and that the safest rule is to confine unprotected sexual activity to the six or seven days before the next expected period.

Since it is advised to keep a record of the periods for at least eight months before a definite cycle can be estimated, since some women never menstruate regularly, when in young brides and often other sensitive women many outside influences change the regularity from month to month, and when after a pregnancy the cycle is often not established for a year or more, it is easy to understand that this method cannot have a universal application. We have, then, a method more correctly named "periodic abstinence" than periodic sexual activity.

For those women whose "religious scruples are stronger than their erotic impulses" and for those women who can sublimate the yearnings of their husbands to mathematics, this method will be a help. There is little danger that it will make obsolete all other forms of contraception.—Journal of the Indiana State Medical Association, July, 1935.

# LABORATORY

Edited by J. L. Lattimore, M.D., Topeka, Kansas

## THE AUTOPSY PERMIT

H. R. WAHL, M.D.*
Kansas City, Kansas

The postmortem examination is the best way of ascertaining why a physician has failed to cure his patient, but, in this country it cannot be performed without the consent of relatives, the permission of the coroner or the express authority of the statutes. The laws in the various states differ, but the general rules are the same. The physician who directly performs an unauthorized autopsy is liable for damages to the relatives even though he may have understood that such permission was obtained by another physician or by the institution employing him. Hence, it is most important that he personally investigate the permit before proceeding with the examination.

The consent to perform a postmortem examination does not have to be in writing though it is obvious that the written permit is preferable. Such a permit should specify the relationship of the one signing it to the deceased. It should also specify the limitations of such examination and state it if it is to be complete. It should also state where the examination is to be held. The undertaker is responsible for what is done to the body while in his custody and has the right to object to an autopsy on his premises unless the permit specifically states that it may be done in his establishment. Usually the undertaker allows the examination to go on, if he is assured that proper authorization has been obtained.

The consent to perform a postmortem examination may be given by the person who has the custody of the body and the responsibility of its burial. It is usually given by the surviving spouse or the nearest kin. Inasmuch as circumstances may alter this right, it is encumbent on the physician to be certain that the permit is signed by the right person before proceeding with the examination.

In the matter of postmortem examinations there are four considerations that should always be kept in mind and determine the procedure: first, reasonable requirements of the deceased from his social status; second, proper respect for the feelings of relatives and friends; third, due respect to the known wishes of the deceased, and fourth, the demands of society.

There is an open question whether a physician may perform an autopsy without permit from the relatives in order to obtain information on the cause of death for the accurate filling out of the death certificate. Some courts have upheld this right, others have denied it. A body cannot be buried without a physician's death certificate. The trend is against such a procedure and to require an order by the coroner for such an examination, if the physician refuses to sign the death certificate.

The coroner may order a postmortem examination whenever there is a question as to the cause of death, whenever there is a possibility of criminal liability or a suspicion of foul play or death from unnatural causes. There are limitations to such examinations. The courts usually allow considerable discretion to the coroner but he must act in good faith and not cause more mutilation than absolutely necessary to secure the information for which the examination was made. He is expected to have regard for the feelings of the relatives. He cannot remove the organs unless they are needed for further investigation and study of the case. The autopsy is not considered a part of the coroner's inquest and the coroner has entire control of those who may witness the examination.

In cases where no known relatives can be found the coroner may order an autopsy. If he does not and no one claims the body in forty-eight hours even after reasonable efforts have been made to find relatives or friends the custody of the body passes to the tenant or to the owner of the premises on which the body was found or in which death occurred. In this way the superintendent of a hospital may dispose of an unknown patient and permit an autopsy at the end of that time. Unclaimed bodies in Kansas are to be turned over to the Anatomical Department of the University of Kansas at Lawrence.

The fact that the deceased was a public charge does not alter the right of relatives to the custody of the body and to consent for a postmortem examination.

The consent to an autopsy is the right of the nearest kin even if some other individual is paying the expenses of the burial. The executor of the estate does not have a prior right over the nearest kin.

*From the Department of Pathology of the University of Kansas.

Recently, the tendency of the courts has been to give every individual the right to designate the fate of his remains and can delegate to an insurance company the right to have an autopsy done on his body.

If a physician is not certain who has the authority to consent to a postmortem examination he would safeguard his own interests by having the permit signed by all those whom he suspects may have such authority.

Information obtained in a postmortem examination is not of a privileged character. The courts hold that the dead body is not a patient and therefore the findings are not confidential.

When a permit has been obtained the examination of the body should be restricted to the limitations set by the permit. The pathologist should be careful not to go beyond what the relatives have agreed to allow.

A permit to a postmortem examination does not include the disposition of the organs and viscera and their removal permanently from the body. It is true that this is the usual custom but it is very doubtful that this is legally included in the permit. In fact, in some states (Missouri) the statutes of the state specifically prohibit such removal of the organs. No such statute exists in Kansas. It is generally held, however, that organs and tissues can be removed if this is necessary for further investigation and study to complete the purpose for which the permit for the autopsy was given. Especially is this true if there is nothing in the permit regarding the disposition of the organs. Otherwise such remains should be returned to the body. The undertaker or the institution where the examination was held as well as the examining physician may be jointly liable if this is not done.

## CASE REPORTS

### ACUTE ANTERIOR POLIOMYELITIS

MAYER SHOYER, M.D.
Soldier, Kansas

Infantile paralysis most commonly occurs sporadically, but from time to time there are epidemic outbreaks, but sporadically or epidemically the disease is not so easy of diagnosis.

The symptoms are many and very deceptive such as fever, vomiting, nervousness, nasopharyngeal inflammation, headache, convulsions, rigidity of neck, tenderness along spine, stupor, pain in the muscles, are all mentioned, but the one all important symptom that comes on early and on which I have relied nearly exclusively is the loss of the patellar reflex.

Dr. Earle G. Brown, Secretary of the State Board of Health, is of the opinion that many patients complain of pain in the area which later will become paralyzed even before the patellar reflex is lost. Of course there are some other diseases that cause loss of the patellar reflex, but they can be differentiated from acute anterior poliomyelitis.

In the six cases I have had in the past five years the symptoms have varied greatly, but the patellar reflex loss has been constant. This all important symptom together with fever, pain in neck and maybe along spine, and painful muscles, justifies a preparalyitic diagnosis. Some of the cases I had were seen by the different county health officers. Preparalytic treatment is all essential, better to treat a case as infantile paralysis than for something else when the above symptoms are present, the treatment can do no harm.

All sick children must be considered cases of infantile paralysis until proved otherwise. I think we owe it as a duty to the child. The wreckage after paralysis is not so easily remedied.

I have had six cases in five years. Three in 1930 and three in 1934-35. The youngest was two years of age, the oldest six. All of the cases were treated with whole immune blood. If I could not get a donor at the time of diagnosis, I used blood from the mother or father and later from a donor who had had infantile paralysis within the last ten or eleven years.

Although it is a fact that many authorities state that neither whole immune blood or immune serum have any real effect on the course of the disease yet it is a fact that it does have a very good effect if given early. After paralysis of course there will be no result except possibly a limiting of the degree of paralysis, this is a guess as I have not had any cases to reach the paralytic stage.

Even if my diagnosis has been wrong in these cases, nevertheless the improvement in symptoms has been so marked in a twenty-four hour period after injecting whole immune blood, it surely seems worth while.

It takes several days for the patellar reflex to return to normal. Thirty to fifty c.c. of whole immune blood is used and repeated in twenty-four hours, and again if necessary.

I have four donors near here who have been very generous in their services.

I first used immune blood in 1930. My only regret is the small number of cases, it makes a report so inconclusive, but possibly some one in the larger cities of Kansas will report a larger number of cases treated with whole immune blood and with the loss of patellar reflex as the early guiding symptom, and as Dr. Earle G. Brown says also pain in the part which later will become paralyzed if allowed to go that far, provided your patient is old enough to tell you where they hurt. The symptoms of infantile paralysis being deceptive and varying in cases, are we sure of a diagnosis from preparalytic symptoms? I think we are. In some of the late text books it states that the treatment is entirely symptomatic and treatment should follow the general rules of infectious diseases. This is a dangerous teaching and should be ignored.

Two cases had as their symptoms, some difficulty in walking across the bedroom, loss of patellar reflexes, and fever. The two year old child had loss of patellar reflex, retracted neck, painful muscles on handling, and fever. One six year old girl had loss of patellar reflex, intense headache, stupor, and fever. One six year old girl had loss of knee jerks, very profuse vomiting, stupor, pain in neck, and along spine, fever and extreme nervousness. In this small series you see the symptoms varied but always present is the loss of the patellar reflex.

## RABIES

CLIFFORD VAN PELT, M.D.
Paola, Kansas

Clifford Allen Kern, Louisburg, Kansas, age eleven, was bitten through the upper lip the night of July 3, 1935, by his pet dog. At the same time the dog was killed with a club by the stricken boy. Immediately the head was placed on ice and the following morning was taken to a Kansas City laboratory. Nigri bodies were found and the boy, within twenty-four hours, began taking Pasteur treatment. Twenty-one doses were given, two doses daily for the first three days and one dose daily thereafter. Everything went well until July 23 when he began to show signs of nervousness and irritability and slept little that night. The parents thought nothing of this and felt quite secure in the fact that he had taken the antirabic treatment. The next morning he arose and carried water on horseback most of the day to a threshing crew. Occasionally when he would hand the water to the men he would make a noise like the barking of a dog. Still little concern was felt until the next morning when his nervousness and excitability increased and it was noticed that there were contractions and spasms about the muscles of the larynx and mouth especially when drinking water. The family physician, Dr. P. F. Gatley, Louisburg, was called. He felt very concerned about him and called Dr. O. C. Lowe and myself in consultation. The disease progresed very rapidly and became much worse during the three hours I was there. The violent reflex spasms of the larynx and mouth accompanied by an intense sense of dyspnoea, especially at the sight of water, was the most distressing feature of the disease. The patient was extremely thirsty but dreaded the sight of water. He spit saliva almost constantly. He was not still a second at a time. He was removed to St. Luke's Hospital that evening where he died about six o'clock, five or ten minutes after entrance to the hospital.

# TUBERCULOSIS ABSTRACTS

## TUBERCULOSIS IN THE CHILD

Many physicians think that all children are infected, and that so-called "tuberculosis infection" may be disregarded unless "tuberculosis disease" supervenes. This is a most dangerous view and often leads to neglect of children who deserve care. Many other physicians do not realize that serious tuberculosis is not at all rare in infancy.

There are two measures of the incidence, namely, the tuberculin skin reaction, and the death rate. The widespread impression among physicians that the tuberculin reaction is of little significance, and that practically all children after infancy are infected is far from the truth. The tuberculin reaction gives very definite information; it shows that the tubercle bacillus has lived and grown in the child's body and has given off something, exciting a sensitivity of the body cells to tuberculin. A positive tuberculin skin test does not tell whether the disease is active or not, nor whether the lesion is tuberculous, but merely that the individual has been infected at some past time.

Of the skin tests, the Mantoux or intracutaneous test has supplanted all others, since it is much more reliable than the Pirquet, Moro, or Calmette tests.

The death rate from tuberculosis, another measuse of incidence, is as high in the first two years as any year until early adult life. It falls off rapidly up to five and the lowest rate is from five to fifteen, after which there is a steady rise. Tuberculosis is often a fatal disease in infants, but relatively not fatal in school children. The clinical aspects of tuberculosis are different in infants (up to two or three) and in older children, and they need separate consideration.

INFANCY TYPES

In infancy the primary focus gives few physical signs. A transient unexplained fever and perhaps failure to gain well are its only symptoms. In fact the element of surprise is the predominant note in nearly all infantile tuberculosis. The following types may be distinguished.

1. Tracheobronchial adenopathy of large extent. Such infants usually have fever and do not gain well. The chest shows practically no signs. The roentgen-ray gives a wide supracardiac shadow, often rounded outlines on one side or both, suggesting nodes.

2. Cases of "marasmus." There may be a story of feeding difficulty, but many infants do well at first and then begin to fail. Routine roentgen-ray should be done on all such patients and may reveal definite tuberculosis in the lymph nodes or wide dissemination, or even large cavities.

3. Cases simulating pneumonia. Fever, prostration, cough and physical signs of consolidation, or with crackling, resonant rales at the bases suggesting bronchopneumonia. These infants may be emaciated but are often fairly well nourished. The roentgen-ray shows mottled shadows over part or all of the pulmonic fields, indicating bronchogenic disseminated tuberculosis or localized consolidation much like a lobar pneumonia.

4. Unexplained high fever, without local signs, often turns out to be disseminated pulmonary or generalized tuberculosis.

5. A final group includes the cases which are definitely suspected of tuberculosis from the outset.

Physical examination of the lungs is often most unsatisfactory in small children. The stethoscope is the least useful instrument at our disposal in the tuberculosis seen in childhood. The roentgen-ray may reveal large lesions in cases where no signs whatever can be elicited either before or after seeing the film. In all the acute and exudative forms of tuberculosis there is a leukocytosis.

OLDER GROUPS

Older children with a positive skin test, fall into the following groups:

1. Recent infections in those who have been infected within two years or less, that is, those who have a fresh primary complex.

2. Those who show calcification in the hilus region of the lung, perhaps a calcified primary focus in the parenchyma.

3. Children who have been infected more than two years who have healed their lesions by resolution and show no calcification.

4. A few who have definite pulmonary tuberculosis.

5. A few who have non-pulmonary tuberculosis in mesenteric nodes, cervical nodes, bones, kidneys, skin, etc.

It is important to determine whether the disease is active or not, since this is the keynote of treatment. Constitutional symptoms are more significant than roentgen-ray findings or physical signs. The better way is to test the children first, then roentgen-ray the positive reactors and in addition seek for signs of activity in all, regardless of the roentgen-ray findings.

The clinical picture of activity is characteristic and quite obvious to a trained observer. The symptoms and signs are few but added together should be enough to arouse suspicion of what is happening to the child. Fever is an almost constant sign of activity; that is, a rectal temperature which rises above 100 degrees nearly every day. Temperatures under 100 degrees may be disregarded in childhood. The fever is irregular, rising to a different level on different days. The highest point may be at any time of day or even in the middle of the night. The great irregularity is characteristic.

Failure to gain weight at the proper rate, (if due to malnutrition) is always a suspicious sign. No other disease seems to exercise so prompt an effect on the nutrition in childhood. Gain in weight may occur in adults with advancing lesions, but is rarely seen in children. There is often secondary anemia.

In infancy, fever, and loss of weight, with or without persistent signs in the lung, should suggest tuberculosis. Of course, bone disease

and meningitis always do so. A Mantoux test, the roentgen-ray and carefully recorded temperature and weight curves are necessary to complete the diagnosis.

In older children, failure to gain, languor, fatigability, a low transmission of the tracheal whisper and hypertrichosis are suggestive. Phlyctenules, tuberculides or other local disease may be the first sign. With a positive Mantoux, fever is significant of activity even with a normal roentgen-ray.

In the diagnosis of tuberculosis three questions should always be kept in mind.

First. Has the child been infected with tuberculosis? Answered by the Mantoux test.

Second. What is the site of the disease? The answer may be given by the symptoms, physical examination and roentgen-ray films. All of these may be practically negative, but in this event the mediastinal nodes are probably the site of the disease, since they are involved in most primary infections, or secondarily to some degree even when the primary complex is elsewhere.

Third. Is the disease active, stationary, or cured? This must be judged by general symptoms, fever, the effect on the nutrition and by any signs or symptoms of local activity.

### TREATMENT

The treatment of children with tuberculosis is based on the same principles as those used in adults. If there are no local or general signs of activity a child should lead a normal life with somewhat closer watching than usual. Activity of the process as shown by fever, failure to gain and local signs of activity, demand rest until all the symptoms have entirely disappeared. The diet is important. Children do not take food nor digest it well if fed too often. Milk between meals or with meat meals is not advisable for any child.

The difficult period comes when a child first begins to get up. As soon as the temperature stays under 100 degrees for several weeks, if he is up to normal weight, and if there is no contraindication from local signs of activity, he may be allowed up a little at a time, but with care to avoid over-exercise. The effect on the temperature is the guide, as in adults. If the temperature again rises as a result of activity it is necessary to put him back to bed again and start over again.

*The Tuberculosis of Childhood, Charles Hendee Smith, Annals of Internal Medicine, March,* 1935.

# MEDICAL LITERATURE

**Edited by Will C. Menninger, M.D., Topeka, Kansas**

### CALCIUM DEFICIENCY IN INFANCY

A group of thirty-six cases, ranging in age from one day to twelve years, and demonstrating a syndrome of increased neuromuscular irritability and functional imbalance was made the subject of a study by Nesbit. The rather heterogeneous group of cases portraying hypertonia, restlessness, excessive crying, retraction of the head, irregular respirations, bronchiospasm, pyloric spasm, enterospasm, convulsions, and cyanotic spells, was treated with methods that improve calcium metabolism, such as the administration of vitamin D, ultraviolet rays, acid milks, calcium gluconate, and the parathyroid hormone. All thirty-six cases showed partial or complete relief. A chart of the clinical manifestations and individual summaries of each case support Nesbit's work.

**Nesbit, Harold T. Clinical Manifestations of Calcium Deficiency in Infancy and in Childhood, American Journal of Diseases of Children, 49:1449-1471, June, 1935.**

### ASTHMATIC INFANTS

In making a study of asthma in children, Waldbott finds that death from asthma in young children and infants is rare, as reported in the literature. He finds in his study that there is a distinct difference between the pulmonary observations of infants and those of adults. The manifestations in the case of an infant resemble more closely those in an anaphylactic lung of a dog than those in the lung of an asthmatic adult and tend to substantiate the theory of anaphylaxis and atopy. Waldbott thinks that it is possible that "thymic death," which is decidedly more prevalent among infants than asthma, according to literature and hospital records, may be the equivalent of death from asthma in infants.

He substantiates his theories by the detailed reports of the post mortem examinations of two children who died after three weeks and six weeks, respeitively, of asthma.

**Waldbott, George L. Pathologic Changes in Asthmatic Infants, American Journal of Diseases of Children, 49:1531-1539, June, 1935.**

### BASOPHILIC HYPERPLASIA OF THE PITUITARY

In a study of the relationship between the endocrine glands and hypertension, Pardee presents two cases. One case reported with a hypertensive plethoric syndrome characteristic of

pituitary basophilism was found to have a basophil hyperplasia of the hypophysis. The second case showed a less marked simulation of the classical syndrome. Additional evidence showed that hyperplasia of the basophil cells of the anterior pituitary may induce a hypertension and a typical syndrome of pituitary basophilism as well.

He concludes that the clinical syndrome of pituitary basophilism is protean, being reported with basophil adenoma, adrenal adenoma, and other unverified cases, and urges further investigation of the pituitary—adrenal—diencephalic complex as a basic cause for hypertension.

Pardee, Irving, Basophilic Hyperplasia of the Pituitary in Essential Hypertension, American Journal of Medical Sciences, 190:1-8, July, 1935.

## SYPHILIS IN THE AMERICAN NEGRO

Because of the wide variation in the literature regarding the incidence of syphilis in the American Negro, Jason reports the preliminary findings of a five year study being made at Freedmen's Hospital in Washington, D. C. The report, which covers the study of Wassermann tests made on 4,595 patients in the hospital from January 1 through December 31, 1933, shows 19.41 per cent positive reactions. Tables showing age, sex, hospital service, address, nativity, and socio-economic level reveal that these factors show significant variations in the incidence of syphilis. Marital status did not affect materially the incidence of syphilis in this study. Jason emphasizes, however, that the figures used in this report are not to be used as absolute indications of the incidence of syphilis in the American Negro, for they apply only to that part of the negro population treated at Freedman's hospital and to only a part of this. Since routine Wassermann tests were made on nearly all the patients only in the obstetrical and genito-urinary wards and in the genito-urinary clinic, Jason feels that the percentage would have been smaller had all the hospital patients been included in the study.

Jason, Robert S. On the Incidence of Syphilis in the American Negro, American Journal of Syphilis and Neurology, 19:313-322, July, 1935.

## INSULIN IN UNDERNUTRITION

Freyberg offers a scientifically controlled study of the effect of insulin on undernutrition to disprove the prevalent opinion that insulin is a valuable aid in the treatment of undernutrition.

The first part of the study included the careful observation of nineteen undernourished patients receiving injections of insulin with no attempt to fatten the subjects. The daily caloric intake and the change in weight was recorded for a control period and special care was taken to keep the patient from knowing what the injections were or that an appetite response was expected of him. Only one of these patients showed any increase in the rate of gain in weight.

In the second part of the study, an attempt was made to fatten the subjects and to measure separately the effect of (1) a high caloric diet, (2) suggestion accompanying injections, and (3) insulin. Eleven patients were placed on a high caloric diet and caloric intake and weight changes were recorded for a control period. When the injections were started the patients were enthusiastically told of the expected effects of the injections. However, sterile water or saline was injected for a period of two or three weeks before the insulin was started. Six of this second group showed no significant change in caloric intake or weight, and in two the benefit was less when insulin replaced the water injection.

Only two patients of the entire study showed any improvement that could definitely be attributed to insulin.

Freyberg, R. H. A Study of the Value of Insulin in Undernutrition, American Journal of Medical Sciences, 190:28-42, July, 1935.

## ELECTROSURGERY IN UROLOGY

Electrosurgery as a treatment in urology is highly advocated by Harrison. He explains its use in the treatment of chancroid, verrucae, epithelioma of the penis, stricture of urethra, hypertrophy of verumontamum, vesical neck obstruction, prostatic hypertrophy, benign papilloma of the bladder, carcinoma of the bladder, chronic prostatitis, and polycystic kidney. Detailed descriptions of instruments and methods and a list of thirty-one references are included in the article.

Harrison, F. G. Electrosurgery in Urology, Archives of Physical Therapy, X-Ray, Radium, 26:393-397, July, 1935.

## ANEMIA IN PREGNANCY

Strauss discusses the causes of anemia, both

hypochromic and macrocytic ("pernicious" in morphology), in pregnant women and its prevention. He concludes that hypochromic anemia of pregnancy is due either to a direct dietary deficiency or to a deficiency conditioned by gastric anacidity, hypoacidity, or associated gastro-intestinal defects in the presence of the fetal demand for blood-building materials. It may be completely relieved, either during or after pregnancy, by the administration of iron in suitable doses. Treatment is important because of the child as well as the mother. Although infants born to women suffering from hypochromic anemia of pregnancy show no reduction in the number of red blood cells or the percentage of hemoglobin at birth, they usually develop hypochromic anemia during the first year. This is presumably due to the shortage of blood-building materials in storage during the period of the milk diet.

Macrocytic anemia of pregnancy may be due to a temporary lack in the gastric juice of a specific intrinsic factor, to direct dietary deficiency, or a combination of these factors. It may possibly result at times from disturbances of intestinal absorption. It can be relieved either during or after pregnancy by the administration of materials potent in Addisonian pernicious anemia or of liver extract.

The development of anemia in pregnancy may best be presented by supplying a blood-building diet to the pregnant woman.

Strauss, Maurice B. The Etiology and Prevention of Anemia in Pregnancy, Annals of Internal Medicine, 9:38-41, July, 1935.

## PEPTIC ULCER

The sequelae of peptic ulcer following medical and surgical treatment is the subject of a study by Hinton. He feels that prolonged medical treatment is likely to cause serious complications as is a too-hasty operation. He urges sound clinical judgment as to the selection of method of treatment. The two indications for operation—a gastric lesion and gastric retention of from fifty to seventy per cent of the meal at the end of six hours—which have been accepted in the past and at present are not reliable, according to Hinton. Gastric lesions respond to medical management much more readily than duodenal lesions and in seventy-five or eighty per cent of patients suffering from gastric retention of fifty to seventy-five per cent of the meal at the end of six hours, the stomach will completely empty under proper medical management. On the other hand, Hinton states, persistent pain with periodicity is a certain indication for referring patients for surgical treatment. A patient of this type is suffering from an associated lesion which is usually chronic pancreatitis.

The incidence of gastrojejunal ulcer is the subject of much discussion and differences of opinion, but Hinton feels that, from the observations in his clinic, that the incidence of 16.4 per cent in cases of gastrojejunal ulcer after gastroenterostomy is an underestimation, rather than an overestimation.

The detailed case histories of seven patients are included as illustrations of his points.

Hinton, J. William, Sequelae of Peptic Ulcer Following Medical and Surgical Treatment, Archives of Surgery, 31: 137-150, July, 1935.

## DELAYED UNION OF FRACTURES

Voshell advocates diathermy and passive vascular exercise as invaluable treatments in the delayed union of fractures. He reports seventeen cases, five of which were treated by diathermy and twelve of which received passive vascular exercise. All seventeen cases, after treatment, showed union, both clinically and through x-rays. As an introduction to his case studies, Voshell gives some pertinent details as to the causes of delayed union, its common sites, and important local factors causing delayed union.

Voshell, Allen F. Delayed Union of Fractures, Archives of Physical Therapy, X-Ray, Radium, 16:421-423, July, 1935.

## MOIST HEAT AND INTESTINAL MOVEMENT

Carlson and Orr present the results of an experimental study as to the penetration of moist heat applied to the abdomen made at the University of Kansas School of Medicine. Warm moist heat was applied to the abdomen of two small and one large dog, three adults, and a child for periods of from one to three hours in a total of forty experiments, and the temperature was recorded in the colon or in an intestinal fistula. The effect of heat on intestinal contractions was noted in dogs with Thiry-Vella loops by the use of kymographic tracings.

It was determined that local applications of heat to the abdomen produce a rise in temperature within the abdomen if the abdominal wall is not too thick. Definite penetration was noted in the child and the dogs, but that in the adults

was negligible. The application of heat to the abdomen or of warm water to the intestine did not affect intestinal tone or intestinal movements.

Carlson, Hjalmar E. and Orr, Thomas G. Penetration of Moist Heat Applied to the Abdomen and Its Effect on Intestinal Movements, Archives of Surgery, 30:1036-1039, June, 1935.

## EFFECTS OF LOSS OF SLEEP

Katz and Landis report the psychologic and physiologic findings in an experiment performed on a man who felt that sleep was merely a habit and that he could break himself of it. Ability tests in typing and intelligence tests were given him before the vigil started, and a physical examination showed him normal. A watchman's recording clock was used as a check to see that he was really awake. The vigil lasted for ten days with a few lapses into sleep which totaled only five and one-quarter hours. Tests were made at various intervals throughout the vigil to determine his physical and mental condition, and his behavior was observed. At the end of the ten days, the experiment was terminated because of the increasing irritability of the subject and his persecutory delusions in regard to some of the experimentors. His physical condition remained normal, and the tests of motor function and mental acuity gave negative results. Tests which depended on visual acuity, however, showed an impairment of general efficiency. Hallucinations, hypnagogic images, a delusion system, and disorientation occurred. Owing to the subject's desire to prove sleep unnecessary, he never complained of fatigue or hesitated to carry out the rigors of the experimental situation.

In general, it was demonstrated that in this case it was possible to go with practically no sleep for approximately ten days without any known physiologic effect and without any permanent change in the personality or the mental function.

Katz, S. E. and Landis, Carney, Psychologic and Physiologic Phenomena During A Prolonged Vigil, Archives of Neurology and Psychiatry, 34:307-317, August, 1935.

## CEREBROSPINAL FLUID IN BRAIN TUMORS

A study of the composition of the cerebrospinal fluid in 218 cases of verified tumor of the brain was made by Hare. In 186 cases, the fluid was obtained by lumbar and in 79 by ventricular puncture. Although the study was of little value in the differential diagnosis of tumor from other diseases of the brain, a detailed account of the findings regarding the increase of protein and globulin in the various types of tumor and its significance is presented.

Hare, Clarence C. The Cerebrospinal Fluid Obtained by Lumbar and by Ventricular Puncture in Tumors of the Brain, Bulletin of the Neurological Institute of New York, 4:64-69, March, 1935.

## DEATH FROM ASPIRIN

Three doctors from the Rochester General Hospital and the Genesee Hospital report a case of a patient suffering from asthma who died when ten grains of aspirin were administered. The patient had twice before had severe asthma and prostration following the ingestion of small doses of aspirin. The doctors feel that death was caused by the combined effects of the severe asthmatic attacks the patient had been undergoing and the reaction to the ingested aspirin.

Francis, Nathan; Ghent, Oliver T., and Bullen, Stearns S. Death From Ten Grains of Aspirin, Journal of Allergy, 6:504-508, July, 1935.

## PRIMARY DYSMENORRHOEA

Endocrine imbalance as the most recent explanation of primary dysmenorrhoea is the subject of an article by Witherspoon. A study of the effect of Follutein on seventeen patients suffering from primary dysmenorrhoea was made and the results listed in tabular form. Follutein (1 cc.) was injected intramuscularly and daily, from three to four days previous to the expected flow, and one to two days during the flow. Thirteen of the seventeen patients so treated received relief.

Witherspoon, J. Thornwell, The Endocrine Origin of Primary Dysmenorrhoea and Its Hormonal Treatment, Endocrinology, 19:403-406, July-August, 1935.

## DERMATITIS FROM HAIR TONIC

Goodman presents a case of dermatitis venenata from application of a proprietary hair tonic. Patch tests were made with the tonic, with its tarry residue after distillation, and with various fractions of the condensation products and of condensed oil. He concludes that a quotient of the tar, not positively identified chemically, was responsible for the dermatitis, although the patient was not sensitive to the application of pharmaceutical tar in any form available.

Goodman, Herman, Dermatitis from Proprietary Hair Tonic, Journal of Allergy, 6:474-476, July, 1935.

Continued on page 384

**Announcing**

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### TUBERCULOSIS

Although Gekler states that no absolute "cure" for tuberculosis has yet been discovered, he presents a discussion of Sanocrysin, gold sodium thiosulphate, as beneficial in certain conditions of tuberculosis and tuberculosis complications. He names renal damage, the appearance of albuminuria in the urine, bowel tuberculosis, and erythema as danger signals and contra-indications to the use of Sanocrysin. The gold sodium thiosulphate is administered intravenously in doses of from 100 to 150 milligrams once or twice a week until four or five thousand milligrams have been given.

Gekler, W. A. Chemotherapy in Tuberculosis, Diseases of the Chest, 1:19-20, August, 1935.

### TREATMENT OF ACNE

Antuitrin S. was administered by Laurence and Feigenbaum to fourteen female patients suffering from acne. An initial dose of one cc. of Antuitrin S. was given to determine individual reaction. The dose was then increased to two cc. three times weekly, unless the reaction to the initial dose made it inadvisable. The treatment was interrupted three or four days before each menstrual period and resumed two to four days after menstruation ceased. In no case was there any demonstrable effect on normal menstruation. In those patients who had acne and menorrhagia or metrorrhagia, the improvement in the acne paralleled the return of menstruation to normal.

Of the fourteen patients treated, eight showed good results, four fair, and two only slight improvement. The authors feel that their series was too small to offer definite conclusions, but that it suggests that the cause of acne lies in an endocrine imbalance coincident with adolescence.

Lawrence, Charles H. and Feigenbaum, Jacob, The Treatment of Acne Vulgaris with Pregnancy Urine Extract, New England Journal of Medicine, 212-1213-1214, June 27, 1935.

### SPINAL ANESTHESIA

The technique of spinal analgesia is presented in detail by Klein in this article which includes discussion of the history of spinal anesthesia, drugs used for this purpose, and the value of spinal anesthesia. The greatest contraindication to spinal anesthesia is an infection around the site of puncture.

Klein, K. T. Spinal Anesthesia, International Journal of Medicine and Surgery, 48:207-209, May-June, 1935.

### THE BLACK WIDOW SPIDER

A very interesting symposium of the literature on the black widow spider is presented in the International Medical Digest. Although the author feels that no great hazard exists because of the black widow, he urges cognizance of its existence and unstinted efforts to exterminate it. The review of the literature includes descriptions of the appearance, habitat, life history, and the web of the spider, experimental studies performed concerning the bites of the spider, symptomatology, treatment, and control measures.

The Black Widow, International Medical Digest, 27:50-60, July, 1935.

### BRIGHT'S DISEASE

Valuable advice to the practitioner in regard to Bright's Disease and hypertension is given by O'Hare. He defines the three principal groups—hemorrhagic or glomerulonephritis, nephrosis, and scleroses—into which Bright's Disease is divided and limits his discussion to three types. He emphasizes the fact that there can be combinations of these three types and that each of these diseases is a generalized disorder in which the kidneys merely play a part, sometimes major, sometimes minor.

O'Hare presents several hypothetical cases and suggests many of the problems confronting doctors with patients suffering from this disease. Each of the three types of the disease is discussed with reference to treatment. He stresses the fact that the intelligent management of Bright's Disease, as well as any other disease, depends on a knowledge of the general course of the disease, a knowledge of the particular patient, and a knowledge of the therapeutic weapons. The second of these three is particularly important in Bright's Disease.

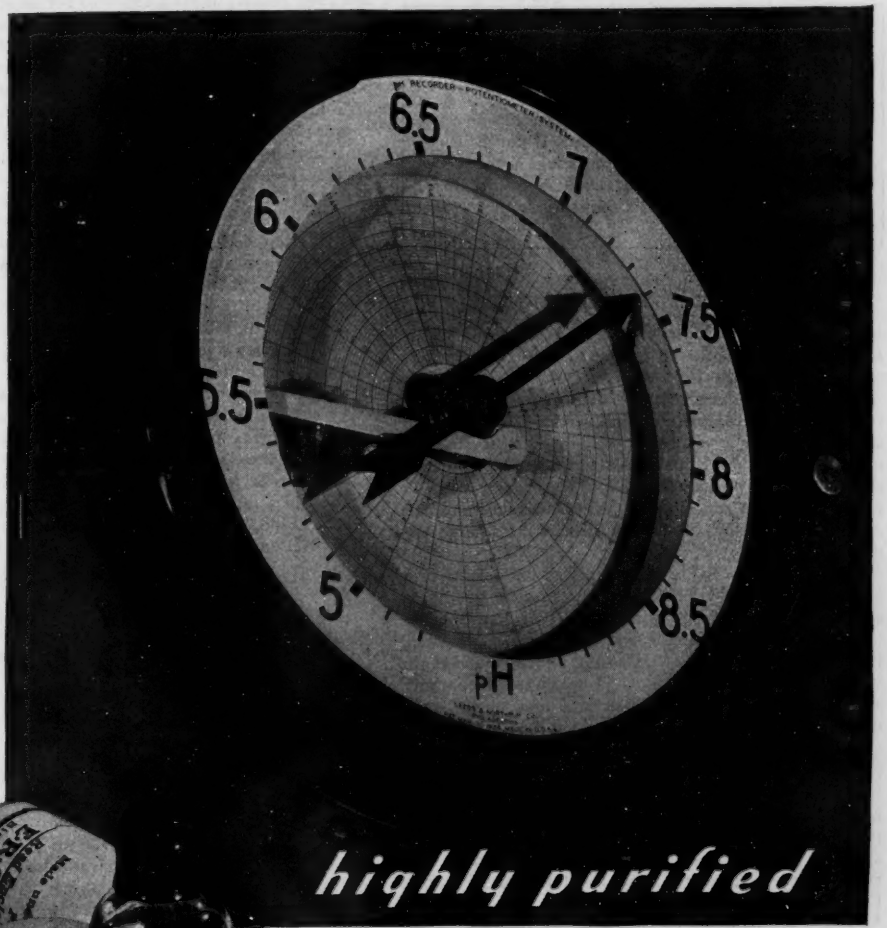
O'Hare, James P. Management of Bright's Disease and Hypertension, New England Journal of Medicine, 212:1197-1202, June 27, 1935.

### Malignant Epithelial Tumors of the Ovaries

Continued from page 371

too small from which to draw any definite conclusions, does bear out the statistics reporting the low percentage of cures in ovarian malignancy, and illustrates the indefinite symptoms associated with this type of cancer.

# INSULIN SQUIBB



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# NEWS NOTES

### ANNUAL REGISTRATION

The Kansas Annual Registration Law provides for registration by physicians before October 1st of each year. After that date licenses are suspended and a fee of $5.00 is charged for reinstatement. If you have not registered for 1935 an application should be forwarded to Dr. C. H. Ewing, Larned, Secretary of the Board of Medical Registration and Examination.

### SOCIALIZED MEDICINE DEBATES

The official question selected by the National University Extension Association Debate Committee for interscholastic debates in 1935-36 is as follows: "Resolved: That the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense." This will mean that more than one hundred thousand students in high schools, colleges, and universities throughout the country will this fall be engaged in research on topics of socialized medicine and in presentation of such information to large audiences.

The effect of these debates upon public opinion is obvious, and it is believed that the medical profession can be of assistance in pointing out fallacies and difficulties that exist in socialized systems. There is also need for activity on the part of the profession inasmuch as the various Foundations interested in socialized propaganda are carrying on extensive campaigns to assist the affirmative phase of the question.

With this thought in mind, the Council in a meeting on July 28, requested that the Medical Economics Committee assemble suitable information for release to Kansas high schools and colleges. Approximately 200 individual packets containing pamphlets entitled: "A Critical Analysis of Sickness Insurance," "Sickness Insurance Not the Remedy," "Sickness Insurance Catechism," "Some Defects in Insurance Propaganda," "An Introduction to Medical Economics," "Health Insurance in England and Medical Society Plans in the United States," "Sickness Insurance, State Medicine and the Costs of Medical Care," "Collecting Medical Fees," "Contract Practice," "The Costs of Medical Education," "Group Practice," "Some Phases of Contract Practice," "New Forms of Medical Practice," "Prepayment Plans for Hospital Care," "Group Hospitalization Contracts are Insurance Contracts," "Distribution of Physicians in the United States" and "Medical Relations Under Workmen's Compensation," and a bulletin by the Committee outlining other information will be forwarded on September 1.

Also members of the Society will be requested to offer assistance to both affirmative and negative debaters in analyzing material and in criticism of papers.

### SOCIAL SECURITY ACT

The medical profession throughout the country has been tremendously interested in certain portions of the Social Security Act recently passed by Congress. This act, among other things, provides $8,000,000 to be appropriated to the various states for aid in public health service; $3,800,000 for advancement of maternal welfare and child health; and $2,850,000 for assistance to crippled children. The health service function will be under supervision of the United States Public Health Service and contemplates individual county and city units composed of full-time physicians, visiting nurses, sanitation officers, and clerks. A sizable portion of the first year's appropriation is to be devoted to the development of these units and to training of personnel. Additional portions of the fund will be used for investigation of special health problems, epidemics and other studies. The maternal welfare, child health, and crippled children's program will be directed by the Children's Bureau of the Department of Labor, and full-time units are expected to provide prenatal, infant and pre-school assistance; permanent and itinerant conferences; school health services including physical examinations and educational programs; health services to employed children and nursing for mothers and children.

State boards of health will assist local supervision, in every state. The Kansas State Board of Health has commenced study of possible projects for use of the Kansas portion of these funds and through request of Dr. Earle G. Brown, Secretary, an Advisory Committee has been established composed of representatives from the medical, dental, hospital, and nursing profession of this state. Dr. B. A. Nelson, Manhattan, and Dr. F. L. Loveland, Topeka, have been appointed by Dr. J. F. Hassig to represent the Society in this connection.

The Medical Economics Committee is also presently engaged in a study of the provisions of this act and hopes to lend assistance in shaping the Kansas program.

### MATERNAL WELFARE COMMITTEE

Pursuant to action taken by the House of Delegates at the last state meeting, Dr. J. F. Hassig recently appointed a committee on Maternal Welfare. The members are as follows: Dr. John L. Grove, Newton; Dr. Charles H. Jameson, Hays; Dr. Roy D. Russell, Dodge City; and Dr. J. H. Peck, St. Francis. It is intended that this committee will operate in a similar manner to the Cancer Committee and that it will be particularly active in cooperating with the maternal welfare and child assistance program provided by the Social Security Act.

### CANCER COMMITTEE MEETING

The Cancer Committee held a meeting on July 31 at Ottawa. A project was discussed wherein district meetings would be held this fall in strategic towns of the state for presentation of cancer lectures by several prominent out-of-state speakers to members of the Society. Decision was made that the project should be contemplated, and that investigation should be made as to possibilities for arrangements and financing.

### MEMBERS

Dr. J. F. Hassig recently appointed Dr. O. P. Davis, Topeka, to serve in his place as an active member of the

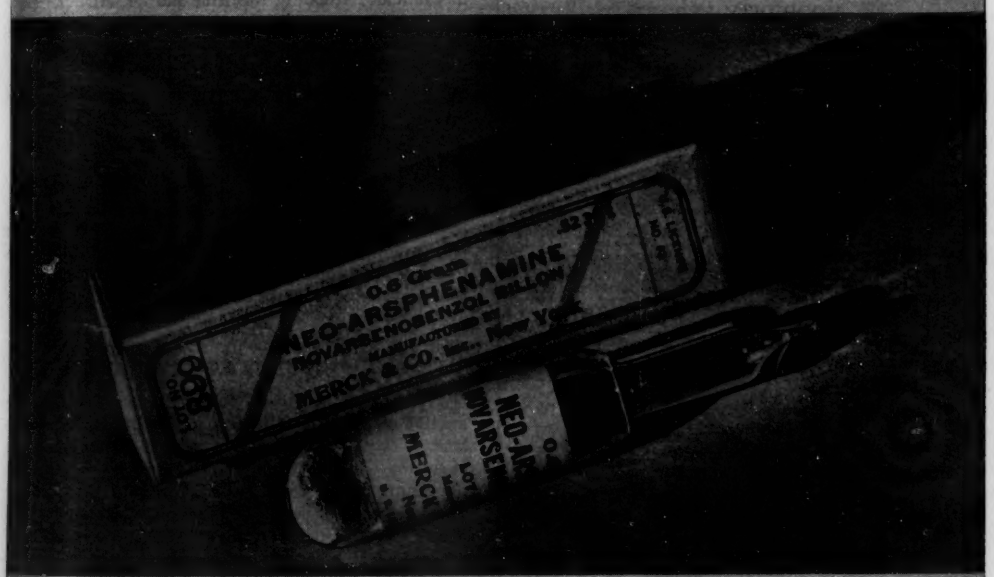
Continued on page 388

# THE TREATMENT OF EARLY SYPHILIS

Basic Principles suggested by
Five University Clinics in collaboration
with the U. S. Public Health Service

- The use of an arsphenamine as the foundation of the treatment.
- The use of a heavy metal as an adjuvant (preferably bismuth intramuscularly).
- Continuation of treatment without a rest period for a period of a year after all symptoms and signs of the disease have disappeared.

*The use of Neo-arsphenamine Merck in the Continuous Method of Treatment may be relied upon to produce satisfactory results.*

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Committee on Revision of Constitution and By-Laws. Dr. Hassig will continue as an ex-officio member.

Dr. Charles F. Attwood Topeka, left July 21 for a trip to Europe where he will do some work in medical research and observation in the London and Paris hospitals. He will also go to the medical exhibits at the Brussels exposition.

Dr. O. W. Davidson, Kansas City, has the honor of being elected to active membership in the American Urological Association at the annual meeting of the organization held recently in San Francisco. There are four other members in Kansas.

Dr. Harold O'Donnell, Ellsworth, has moved to Wichita, where he will be associated with Dr. G. B. Morrison, in the Schweiter Building.

Dr. H. E. Robbins, Belleville, has moved to Denver, Colorado, where he will become a resident surgeon in the Chicago, Rock Island, and Pacific Railway hospital of that city.

Dr. H. C. Sartorius, Garden City, gave a talk on "County Health" before the members of the Rotary club in Garden City on July 24.

## MORBIDITY REPORT

New communicable disease cases in the state as compared with last month are reported by the Kansas State Board of Health as follows:

| Disease | Month ending August 8 | Month ending July 6 |
|---|---|---|
| Whooping cough | 264 | 310 |
| Measles | 169 | 769 |
| Pneumonia | 159 | 268 |
| Tuberculosis | 155 | 87 |
| Syphilis | 123 | 75 |
| Mumps | 118 | 269 |
| Gonorrhea | 96 | 37 |
| Scarlet Fever | 85 | 116 |
| Typhoid Fever | 63 | 20 |
| Chickenpox | 22 | 84 |
| Influenza | 20 | 47 |
| Diphtheria | 20 | 25 |
| Undulant fever | 19 | 11 |
| Smallpox | 18 | 76 |
| Malaria | 17 | 3 |
| German Measles | 11 | 91 |
| Erysipelas | 11 | 3 |
| Meningitis | 10 | 5 |
| Cancer | 9 | 3 |
| Tetanus | 6 | 1 |
| Vincent's angina | 5 | 2 |
| Poliomyelitis | 2 | 2 |
| Encephalitis | 1 | 2 |
| Pink-eye | 1 | 0 |

## NEW BOOKS RECEIVED

ANNUAL REPRINTS OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY of A.M.A. for 1934. Published by the American Medical Association at $1.00 per copy.

NEW AND NON-OFFICIAL REMEDIES for 1935. Published by the American Medical Association at $1.50 per copy.

THE DOCTOR AND THE PUBLIC by Dr. James Peter Warbasse. Published by Paul B. Hoeber, New York, at $5.00 per copy.

LIVING ALONG WITH HEART DISEASE by Dr. Louis Levin, cardiologist to St. Francis Hospital and the New Jersey State Prison Hospital, New Jersey. Published by the MacMillian Company, New York, at $1.50 per copy.

A SYNOPSIS OF REGIONAL ANATOMY by T. B. Johnston, M.B., professor of anatomy, University of London, Guys Hospital Medical School. Published by Lea & Febiger, Philadelphia.

LABORATORY DIAGNOSIS, Second Edition, by Dr. Edwin Osgood, assistant professor of medicine and biochemistry, University of Oregon School of Medicine. Published by P. Blakiston's Sons & Company, Philadelphia, at $6.00 per copy.

CLINICAL DIAGNOSIS BY LABORATORY METHODS Eighth Edition by Dr. James Campbell Todd, late professor of clinical pathology, University of Colorado, School of Medicine and Dr. Arthur Hawley Sanford, professor of clinical pathology, University of Minnesota. Published by the W. B. Saunders Company, Philadelphia, at $6.00 per copy.

## LOCATION

A letter has been received from Mr. J. E. Kingsley, of Windom, Kansas, stating that there is no physician in that town, and that a good opportunity is available. Windom is a town of 250 population situated in McPherson County. Additional information may be obtained from Mr. Kingsley or from the central office.

## COUNTY SOCIETIES

Members of the Brown County Medical Society held a meeting on August 30 in Hiawatha with Dr. F. L. Loveland, Topeka, as the guest speaker. A dinner at the Hiawatha Country Club was followed by a meeting at the Court House, where Dr. Loveland discussed the Kansas Medical Society Plan for the medical care of direct relief and work relief families.

A regular quarterly meeting of the Dickinson County Medical Society was held on July 24 in Hope following a dinner. Dr. L. G. Heines, Abilene, read a paper on "Diseases of Coronary Arteries" and Dr. Theodore Kroesch, Enterprise, read a paper on "State Medicine".

The Franklin County Medical Society held a meeting on July 31 in Ottawa at the Ottawa Country Club. Golf in the afternoon was followed by a dinner at the clubhouse. Members of county societies in the surrounding

Continued on page 390

**DOCTOR! You Are Invited to Attend . . . . . .**

# THE OKLAHOMA CITY CLINICAL SOCIETY'S

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## November 4, 5, 6, 7, 1935

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DR. BARNEY BROOKS, Surgery, Nashville
Prof. of Surgery, Vanderbilt Univ. Hospital
DR. JAMES T. CASE, Radiology, Chicago
Prof. of Radiology, Northwestern Univ. Med. Sch.
DR. JOHN R. CAULK, Urology, St. Louis
Prof. of Clin. G-U Surg., Washington Univ. Sch. of Med.
DR. MAX CUTLER, Surgery, Chicago
Tumor Clinic, Michael Reese Hospital
DR. PALMER FINDLEY, Gynecology, Omaha
Attending Gyn., Swedish Mission and Methodist Hospitals
DR. FRED J. GAENSLEN, Orthopedics, Milwaukee
Prof. of Orth. Surg., Univ. of Wisconsin Med. Sch.
DR. CLIFFORD G. GRULEE, Pediatrics, Chicago
Prof. Pediatrics, Rush Med. Coll., Univ. Chicago
DR. RUSSELL L. HADEN, Internal Med., Cleveland
Chief of Medicine, Cleveland Clinic
DR. JAMES S. McLESTER, Int. Med., Birmingham
President American Medical Association
DR. GRIER T. MILLER, Int. Med., Philadelphia
Asst. Prof. of Med., Univ. of Pa. Sch. of Med.
DR. C. S. O'BRIEN, Ophthalmology, Iowa City
Prof. of Ophthal., Univ. of Iowa Sch. of Med.
DR. PAUL A. O'LEARY, Dermatology, Rochester
Head of Dept. of Derm. and Syph., Mayo Clinic
DR. FRED W. RANKIN, Surgery, Lexington
Former Prof. of Surg., Univ. of Louisville
DR. RALPH M. WATERS, Anesthesia, Madison
Prof. of Anesthesia, Univ. of Wisconsin Med. Sch.

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towns were guests of the members of the Franklin County Society. Dr. H. L. Snyder, Winfield, spoke on "Cancer and Its Relation to the General Practitioner".

Members of the Labette County Medical Society and their wives held a picnic at the home of Dr. M. C. Ruble in Parsons on July 31. After the picnic, medical motion pictures were shown.

## PUBLIC HEALTH

A brief study has recently been completed of the deaths of 170 Kansas physicians, reported in the past four years. Chronic myocarditis was the leading cause with 27 deaths; cancer and chronic nephritis were second with 16 each; diabetes and coronary thrombosis were fourth with 13 each; cerebral hemorrhage was sixth with 12; angina pectoris and external violence were seventh with 11 each. Accidents were responsible for seven deaths and suicides and homicides two each. Motor vehicles were the cause of five of the seven accidental deaths.

Excluding deaths from violence, the average age at death was 67.3 years. The youngest was 35 years and died as a result of influenza-pneumonia infection. The oldest was 96 years, death due to a chronic myocarditis. Forty-two were under 60 years at the time of death. Thirty-six deaths were in the age group 65-69 years; 25 were in the group 60-64 years; 23 were 75-79 years; 22 were 55-59 years, and 21 were 70-74 years.

An average of 38.6 years had elapsed from the time of graduation to the time of death. The least time in practice was 4 years, death being due to miliary tuberculosis. Two physicians had graduated from medical school 69 years and both were retired at the time of death. Nineteen physicians were reported to have been retired from active practice for a period of one or more years.

Again excluding deaths from external violence, 61 deaths were attributed to diseases of the cardiovascular system, or 41 per cent. Of the 20,011 deaths reported in the state in 1934, only 25 per cent were due to cardiovascular disease. In this year for the state, organic heart disease was the leading cause; cancer was second; apoplexy third, accidents fourth, and chronic nephritis fifth. Among physicians for the four years, cancer and chronic nephritis were tied for second, and cerebral hemorrhage was sixth.

Although the number of deaths studied was comparatively small, the findings show the apparent result of the strenuous life of the average practitioner of medicine. "The anxieties and stresses of medical practice, irregularities in dietary habits, the disturbed rest and the multifarious activities of the busy practitioner tend to exhaust the cardiovascular apparatus" . . . . "Longevity is an art as well as a science. The art consists in practicing a reasonable adaptation to environment and adherence to the laws of hygiene based on a knowledge of oneself and one's needs."

Do You Know—That 488 cases of poliomyelitis were reported in the United States for the week ending August 10?

That in the past 11 weeks only seven cases of poliomyelitis were reported in Kansas; 28 in the same period of 1934?

That two deaths have been reported from tularemia in the present year?

That 221 measles deaths have been recorded to August 1; 31 in the same months of last year?

That 13 typhoid fever deaths have been reported in the seven months of the present year; 8 in 1934?

That in the 11 weeks ending August 17, 132 cases of typhoid fever were reported, 14 less than in the same months of 1934?

That the United States 1934 infant mortality rate was 59.5?

That the Kansas 1934 infant mortality rate was 48.4?

That 21 diptheria deaths have been reported in the seven months of 1935; the same number as in 1934?

That malaria cases are showing a definite increase this year over the numbers reported in preceding years?

In compliance with an act of the 1935 legislature, the state board of health is now preparing convalescent serum for the treatment of poliomyelitis cases. The serum is supplied in 25 cc. ampoules, at a cost of $4 per ampoule. Serum may be secured at the following sub-stations, in addition to the Topeka office:

| | |
|---|---|
| Johnson Hospital | Chanute |
| Bellamy Drug Store | Colby |
| St. Joseph Hospital | Concordia |
| Kuhn Drug Store | Dodge City |
| Pearl's Drug Store | Garden City |
| St. Rose Hospital | Great Bend |
| First National Pharmacy | Wichita |

The 64th Annual Meeting of the American Public Health Association will be held at Milwaukee, Wisconsin, October 7-10, inclusive.

The Advisory Commission of the State Sanatorium for Tuberculosis held a meeting at Norton on August 13. Dr. H. L. Snyder was named as Chairman, and Dr. F. L. Loveland, of Topeka, Secretary.

In the 1934-35 list of licensees issued by the Kansas Board of Medical Registration and Examination are the names of 49 women doctors of medicine, eligible to practice in the state.—Furnished through the courtesy of the Kansas State Board of Health.

## ANNOUNCEMENTS

### THIRTEENTH ANNUAL FALL CLINICAL CONFERENCE OF THE KANSAS CITY SOUTHWEST CLINICAL SOCIETY

The Thirteenth Annual Fall Clinical Conference of the Kansas City Southwest Clinical Society will be presented in Kansas City, Missouri, October seventh through tenth. The entire scientific program will be presented in the President Hotel with morning, afternoon and evening sessions.

Guest speakers, who will each present two or more scientific subjects, include Dr. Fred Albee of New York City; Dr. John Alexander of Ann Arbor, Michigan; Dr. Wayne Babcock of Philadelphia; Dr. Harlow Brooks of New York City; Dr. Arthur C. Christie of Washington, D. C.; Dr. Alfred Folsom of Dallas, Texas; Dr. Harry S. Gradle of Chicago; Dr. Francis E. LeJeune of New Orleans; Dr. Wm. S. Middleton of Madison, Wisconsin;

Continued on page 392

*"Hurry, Jimmie, or you'll be late for school again. Mother forgot to set the alarm clock. Please don't DAWDLE like that. Here, take your bun and eat it on your way to school. HURRY, darling, teacher will have a fit! PLEASE hurry!"*

THE milk is the best item in this child's hurried, harried, worried breakfast, but milk alone is inadequate. The simple replacement of the bun or roll by Pablum would, with added milk, give the child a better-constituted and more nourishing meal on which to start the day right at school. Pablum can be prepared appetizingly, in a few seconds' time, without cooking.

THE LAST-MINUTE BREAKFAST

# "Going to school on an empty stomach"

—not because his parents are poor or illiterate, but because his mother didn't allow sufficient time for an adequate, nourishing morning meal.

This scene occurs every morning in thousands of homes, and many a school child is a poor scholar because of a poor breakfast.

For little boys and girls* whose mothers don't get up early enough in the morning, or who can't figure time accurately, a good, nourishing, well-constituted, economical and *quick* morning meal is:

| | |
|---|---|
| Orange Juice or Tomato Juice | qs |
| Pablum ¢ milk or cream | qs |
| Sugar | qs |
| Capsule, Mead's Viosterol in Halibut Liver Oil | I |
| More Milk | qs |

Such a breakfast supplies important amounts of all the following essential nutritional requirements: **Protein,✓ Fat,✓ Carbohydrate.✓ Vitamins: A, B, C, D, E, G.✓✓ Minerals: Calcium, Phosphorus, Iron, Copper, Etc., Etc.✓✓✓ Calories.✓**

PABLUM can be prepared in less than a minute and does away with pots and pans and endless overnight and early-morning cereal cookery and drudgery. Simply add milk or water of any desired temperature and serve with cream, salt and sugar.

**Pablum (Mead's Cereal thoroughly pre-cooked by a patented process) consists of wheatmeal, oatmeal, cornmeal, wheat embryo, alfalfa leaf, beef bone, brewers' yeast, iron salt, sodium chloride.**
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*and perhaps also for their fathers who have to gulp a one-minute breakfast before going to work.

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Dr. M. G. Peterman of Milwaukee, Wisconsin; Dr. Edward A. Schumann of Philadelphia; Dr. Albert Soiland of Los Angeles, and Dr. Cyrus C. Sturgis of Ann Arbor, Michigan.

Scientific papers will also be presented before the General Assemblies by seventeen members of the society. In addition, two hours will be devoted each morning to Sectional Lectures and Clinics, presented by members of the society. Six sections and two clinics will be presented concurrently on non-conflicting subjects.

Scientific and Technical Exhibits will be housed on the convention floor of the hotel and will be open to visitors daily.

The Public Meeting will be held Monday evening in the Ararat Shrine Temple. This meeting will be open to the public with Dr. Harlow Brooks, Dr. Arthur Christie and Dr. Albert Soiland each bringing a message of special interest to the laity and the profession.

The scientific session of Tuesday evening will be complimentary to the members of the local county medical societies as well as all registrants for the conference. Speakers will be Dr. Wayne Babcock, Dr. Harlow Brooks and Dr. Arthur C. Christie.

Each day's Round Table Luncheon will afford an additional opportunity for the doctors to hear informal talks by guest speakers. Tuesday's luncheon will be a testimonial to John Fairbairn Binnie, with a talk by Dr. Wayne Babcock. The luncheon on Wednesday will be a memorial to Jabez North Jackson.

Wednesday evening's entertainment will include a tour of the Wm. Rockhill Nelson Gallery of Art, which will be complimentary to the doctors and their families.

The women's committee have arranged various features of entertainment all of which will be complimentary to the wives of the physicians registering for the Fall Conference. A special registration desk and social calendar will be available for the visiting women.

The closing feature of the four days intensive meeting will be the Alumni Dinners. An added feature will be the Clinical Society dinner which will be for men and women.

—KMSJ—

Work is being commenced on the Fourteenth edition of the American Medical Directory. The American Medical Association requests that all members forward corrections or other information that should be included, and that delinquent members and eligible non-members be advised in order that they may have an opportunity to be listed as members.

—KMSJ—

The American Congress of Physical Therapy will hold its fourteenth annual scientific and clinical session in Kansas City, Missouri, on September 5-12 inclusive. The Instruction Course will last from September 5-7 and the Annual Session will last from September 9-12. Full information may be obtained by writing to the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Illinois.

—KMSJ—

The Fifth Convention of the Biological Photographic Association will be held in Chicago, Illinois in the Stevens Hotel on Thursday, September 12-14. The registration fee is $3.00 and will include a banquet ticket.

## "NATUREIZING"

Reproduced below in verbatim form are two circulars now being distributed by a Kansas chiropractor. The miracles of "vertebral subluxation" apparently have no end:

Specializing in
Natureizing
Women

Dear Madam:

To a select list of ———— business women I am introducing the method of natureizing which has to do with the duration of the period of menstruation.

The naturize method tends to normalize women not eliminateing the monthly period but by shortening the duration to correspond with that of our primitive sisters. The duration of the period of primitive women is less than one day monthly. We can now be as they are in this respect.

Did this question ever arise in your mind—How is it possible for actresses and circus performers to carry on their work daily during menstruation? The secret lies in the fact that they have been natureized and the menstruation period lasts but from two hours to only one day each month.

"Habit cycles are born and bred in the bones"—Thru superstition women have been taught that menstruation is a sort of curse sent on them. This is one "Great Cydic Error"—Menstruation is a Pathological rather than a Physiological act. The cycle can be broken by natureizing.

Natureizing is done by drugless therapy, is harmless and conductive to good health. It requires but a few minutes time during menstruation period.

Dr. Starrwhite who has the largest personal practice of any doctor in the U. S. has been natureizing women for over 50 years. I am now making his method available to you.

Many a public woman has been so handicapped by this function being abnormal or unnatural that they have stepped down and let inferior men take their places. This is no longer necessary.

Do not condemn before you investigate this method perhaps there is still more to be learned about this subject.

Sunday appointments for Professional Women—
Write or phone.

Dear Madam—

How to restore natural function by Drugless Therapy is nature's safest method.

In a 3 to 5 day menstruation period of civilized woman natural? while the period of primitive woman is less than one day—We say No—even without changing our mode of living back to that of the primitive state it is possible to overcome the excessive long duration of the period and reduce it to from 2 hours to one day per month.

Actresses and many of the most prominent women in the U. S. have been Natureized is how they keep physically fit to carry on their work daily without hindrance of the menstruation period.

For the average woman Natureizing requires but 15 minutes time each day for 3 days each month while changing and establishing the habit of the shorter period.

Natureizing does not hasten menopause—menopause is practically without nervous phenomena in women

Continued on page 394

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treated in this manner—child-bearing period is not shortened thru this method—the pains of childbirth are practically annihilated thru this natureizing of the menses. Natureizing is conducive to good health—and it is one of the greatest privileges yet to become a "non-sanguinous type" being no longer handicapped by a 3 day or 5 day period each month.

Sunday appointments for Professional Women only—I am first to introduce this method in this territory—This method has always sold at $100. Phone or write for appointment.

## EXCHANGES

Doctor-Baiters—The doctor, as Mr. Ogden Nash pointed out some time ago . . . is the first person to be called in time of trouble and the last person to be rewarded even in a period of prosperity. For half of their calls most doctors are never paid. And this prodigious service is accepted as a matter of course. It is taken for granted. I might say that it is even demanded, and demanded with indignant insistence.

For a recent check-up of my friends reveals that many of them criticize, deplore and even despise the medical profession. Some of them do so because a certain doctor has made what appeared to be an error in a particular case. Others take a haughty attitude toward the profession because it cannot cure cancer or hardening of the arteries or something else equally abstruse and fatal. It is futile to recite to those uncharitable nitwits the hundreds of ailments and diseases which medicine and surgery can cure or have obliterated. Still other people—legions of people—are staunch supporters of one or another form of quackery and they chart their health on idiot diets or systems of bone-tweaking.

Now I know, more or less intimately, about a hundred doctors, surgeons and biological research workers. Among them all there is not a single one who is unwilling to change his opinion in the face of new discovery, more lucid theory or improved technique. That is more than can be said of their patients. The run-to-the-mill human dope who is brought up to believe that kerosene is good for colds will go on believing it to his grave. And almost any layman ambling along the street thinks that it is his divine right to argue with a doctor. The fact that the doctor really knows something about the human carcass means nothing to him.

He would not think of starting a debate with an engineer about the best method of bracing a bridge. He generally runs his car meekly into a garage and tells the mechanic that it makes a funny noise when you shift gears. But he will gleefully reject the orders of his doctor and supplant them with some nut scheme of his own. "Medicine," he will say pompously, "is not an exact science." Neither is garage trouble-shooting—but you let a mechanic do it.

The doctors have to stand for that. The Constitution guarantees to every man the right to make a fool of himself. And yet, if the common law, which makes an attempt at suicide a crime, were extended logically, it would clamp down on a few million citizens who are making chumps of themselves in the matter of self-preservation.

In such intellectual fields as religion, one man's opinion may be as good as another's—although I myself am inclined to doubt even that. But in the subject of medicine, a mug's notions are not as good as a doctor's knowledge. And generally the self-swollen jape who is loudest in the disparagement of doctors, is the bearer of an appendix scar or the survivor of pneumonia via serum or perhaps malaria via quinine.

There is no logical reason to explain the fact that a certain group of high-minded young men and women decide that they will devote themselves to the unpleasant business of tending the sick, often without reward, often at gruesome hours on icy streets, often when the act entails grave personal dangers. If logic were applied to the matter, your doctor would be like the light company, and if the bills were not paid on time he would send a brief note informing you that medical attention was suspended and you could die quietly—or noisily—alone.

If a doctor did such a thing the nation would lift its hands in horror. The light companies do it every day.

And yet there has never been a group of people in the history of the world which equalled the men of the contemporary medical profession in their balance of ideals and sense. The doctors martyr themselves oftener and more nobly than any zealots or fanatics. They hold the highest possible code of emotional altruism. And underlying it is a superb sanity, a stern adherence to realism, honesty, scientific truth.

If the amateur critic of doctors could only know what an errant fool he was he would stop in mid-speech, shocked and apologetic—but, as in all matters, to understand the depth of his folly he would have to be wise enough not to be such a jackass in the first place.—Article by Philip Wylie, published in the New York American and Westchester Medical Bulletin.

Social Workers—Professional social workers, no less than tax collectors, have been liberally prvoided with employment during the past six years. Washington is overrun with short-haired women and long-haired men most of whom have been provided with jobs. These "workers" speak a strange jargon of man-hours, case-loads, indices, and like technological phrases that glorify the occupation. It is rumored with increasing frequency that professional social workers are more concerned with perpetuating their jobs than they are in seeing any lift in the depression. A commission investigating relief in New York City minced no words in a report last week charging that those who were doling out relief liked the job and didn't like the idea of having it taken away from them. We can understand the aversion of a case-worker to becoming a part of the case-load. The kindly attitude of the administration toward professional social workers has aroused the ire of thinking men and women the country over. The Government, it is said, has a larger responsibility than doling out tax dollars in direct relief and perpetuating a tremendous bureaucracy. While it is recognized that men and women must not starve, it is felt that there is little that the dole-minded relief workers have done other than temporarily ameliorate suffering and spend millions of tax dollars.

The American people, who can't be fooled all of the time, is regarding doled-out relief questioningly. It knows that millions of unemployed and underpaid Americans cannot subsist indefinitely upon public charity, and it is fast coming to the realization that a new economic order is the only alternative to increasing want. When that new economic order comes and the worker can retain all his wages, capital all its interest, and all public service will

Continued on page 396

# *Chemistry Challenges Custom!*

INFANT FEEDING advanced with the advent of mixed sugars in artificial formulae. But milk modifiers are more costly than milk. And mothers believe the mixed sugars to be the more essential constituents of the formula. The cost of the milk modifiers is kept high to keep up this delusion.

But modern Food Chemistry challenges this psychology. The maltose-dextrins are marketed as a food—Karo. And now, mothers buy milk modifiers as a food, not as a drug. *The saving is 80%.* The Corn Products Refining Co. charges for the constituents of Karo and nothing extra for the good name.

Prescribe Karo, the modern milk modifier. Karo Syrup is essentially Dextrins, Maltose and Dextrose, with a small percentage of Sucrose added for flavor. It is the carbohydrate of choice because it is well tolerated, readily digested, effectively utilized. Karo does not cloy the appetite, produce fermentation or disturb digestion.

*Corn Products Consulting Service for Physicians is available for further clinical information regarding Karo. Please Address: Corn Products Sales Company, Dept.* S J-9, *17 Battery Place, New York City.*

be paid for by the collection of the rental value of land, there won't be any call for professional social workers and the glib chatter of case-loads and man-hours will be forgotten.—Labor Herald, July 20, 1935.

The Infamous Brinkley—It is reported by the Kansas State Medical Association Journal that J. R. Brinkley has lost his license to practice medicine in that state. The Board of Medical Registration revoked it and had to defend their action in court. Judge Johnson in rendering a decision had the following to say:

"These methods are not only notoriously in conflict with the ethics of the profession, but in my opinion, in conflict with the best interests of the public, and irrespective of the value of the operations performed by him at the hospital for the amelioration of the prostate gland, or the benefits to individuals using prescriptions given them through radio broadcasts. The possibilities of injury to the general public resulting from such methods are so apparent that its mere statement is sufficient."

No doubt Judge Johnson's decision will strengthen the authority not only of the Board of Examiners of Kansas, but of other states as well, in protecting the public from quacks and charlatans in the future besides giving judicial sanction to such of our medical ethics as are opposed to advertising and promiscuous prescribing.—Southwestern Medicine.

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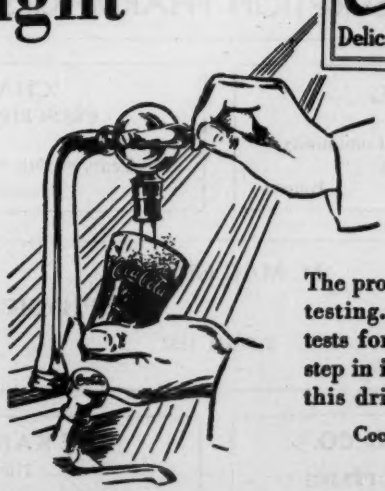

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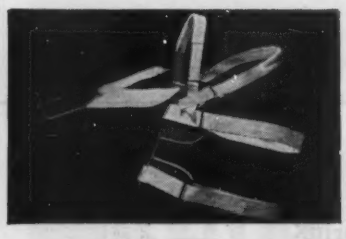

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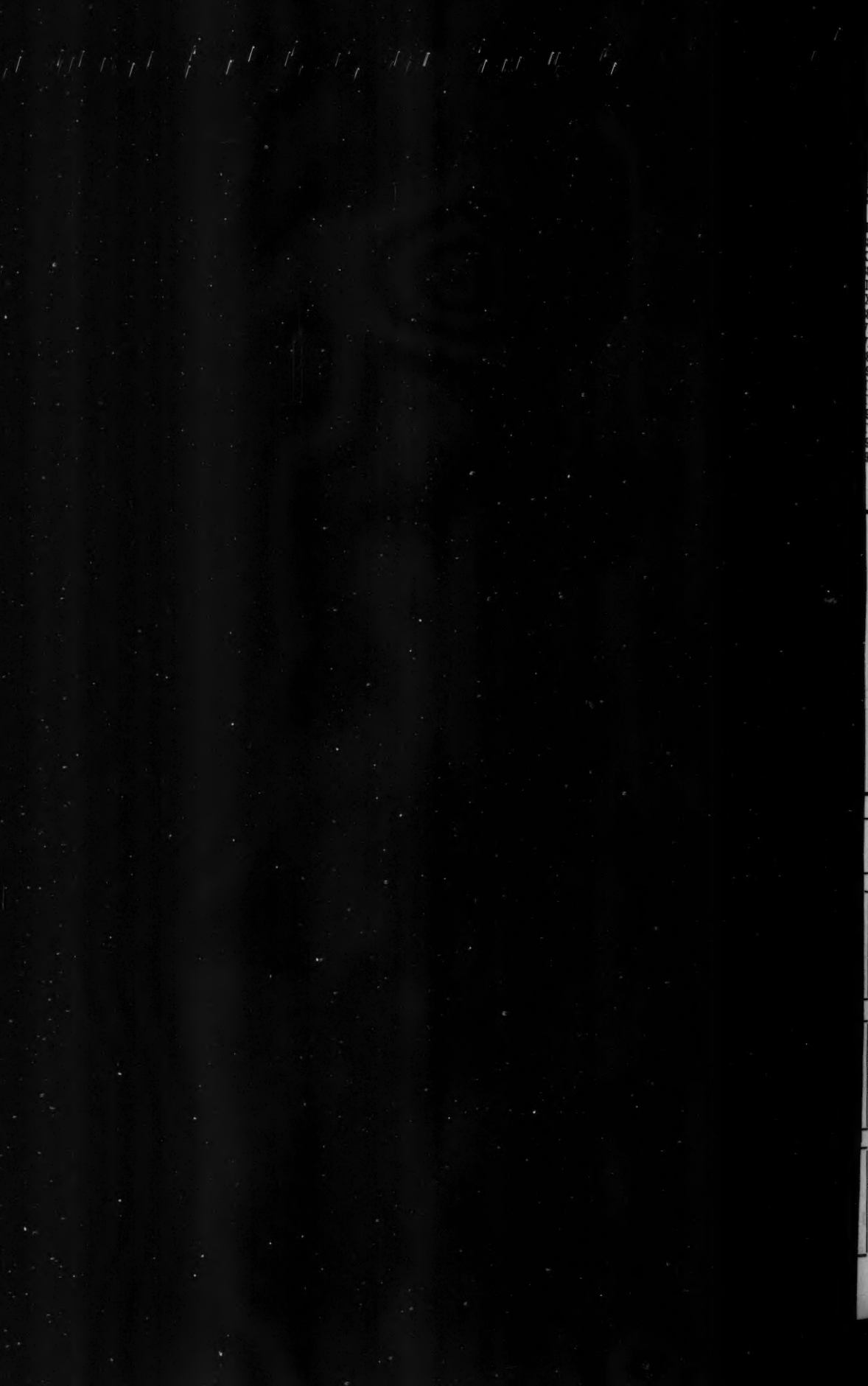

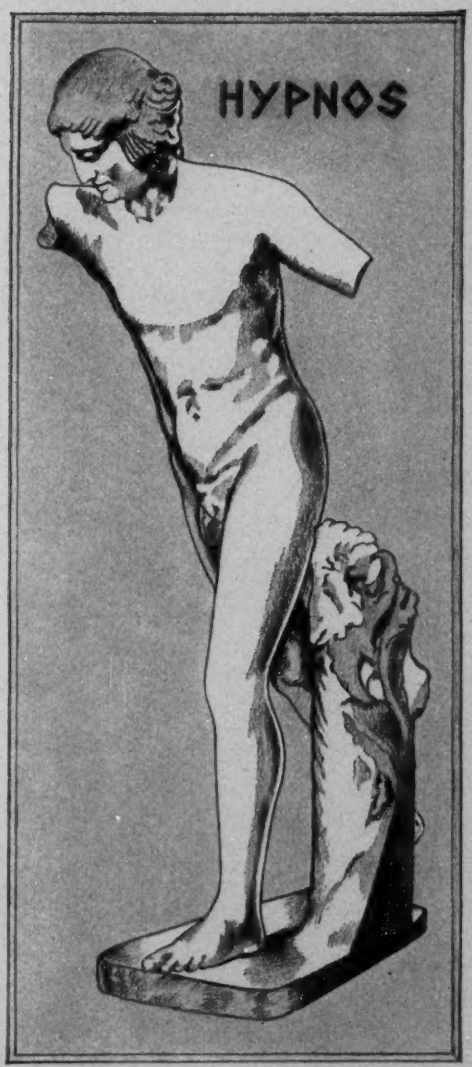


# SLEEP

*"Sleep, mildest of all the gods, thou art thyself sweet peace of mind, a soothing balm, an alien to care, and brightest rest and strength to mortals worn and weary with the toils of life."*

—OVID

IN troubled mind or weakened body, sleep has ever been Nature's own restorer. The quiet halt of sleep alone can yield a sound retreat from mental unrest, from the fretful thoughts which plague the mind in time of stress. It affords that pause during which the physiologic forces are directed toward the rehabilitation of the worn or diseased body. Without it, the best of therapeutic efforts may often go awry. Yet many times when sleep is needed most, the patient frets himself into a frantic wakefulness. It is here that the induction of sleep may be vitally important. When the physician desires a mild hypnotic action, relatively free from side-actions which might complicate the function of recovery, Ortal Sodium may be employed; its action is prompt, and the dosage can be regulated to provide the proper degree of sedative or hypnotic action, according to individual requirements.

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